REPORT RESUMES

ED 011 089 24

SATISFACTION AND DISSATISFACTION OF TEACHERS. FINAL REPORT.

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REPORT NUMBER BR-5-8394 PUB DATE 66
ROCHESTER UNIV., N.Y.
REPORT NUMBER CRP-S-648
CONTRACT OEC-6-10-339
EDRS PRICE MF-$0.27 HC-$6.32 158P.

DESCRIPTORS- *WORK EXPERIENCE, *TEACHERS, *JOBS, *INTERVIEWS, *WORK ATTITUDES, FACTOR ANALYSIS, ROCHESTER, URBANA

JOB SATISFACTION AND JOB DISSATISFACTION FACTORS FOUND IN THE WORK SITUATIONS OF TEACHERS WERE INVESTIGATED. TWO QUESTIONS WERE PROPOSED FOR INVESTIGATION--(1) IS THERE A SET OF FACTORS WHICH TENDS TO SATISFY TEACHERS AND ANOTHER SET OF FACTORS WHICH TENDS TO DISSATISFY TEACHERS, OR, ARE THE FACTORS ARRANGED ON A CONCEPTUAL CONTIMUUM WITH EACH BEING A POTENTIAL SATISFIER AND DISSATISFIER, AND (2) WILL THE DISTRIBUTION OF FACTORS VARY FOR SUBGROUPS OF TEACHERS. THE FINDINGS OF THIS STUDY REVEALED THAT SOME FACTORS, REPORTED BY TEACHERS AS CONTRIBUTING TO THEIR JOB SATISFACTION AND JOB DISSATISFACTION, WERE POLAR IN A POSITIVE DIRECTION AND OTHERS POLAR IN A NEGATIVE DIRECTION. THE SATISFACTION FACTORS TENDED TO FOCUS ON THE WORK ITSELF, AND THE DISSATISFACTION FACTORS TENDED TO FOCUS ON THE CONDITIONS OF WORK. ACHIEVEMENT, RECOGNITION, AND RESPONSIBILITY WERE FACTORS WHICH CONTRIBUTED PREDOMINANTLY TO TEACHER JOB SATISFACTION. INTERPERSONAL RELATIONS (SUBORDINATES), INTERPERSONAL RELATIONS (PEERS), SUPERVISION, SCHOOL POLICY AND ADMINISTRATION, PERSONAL LIFE, STATUS, AND UNFAIRNESS WERE FACTORS WHICH CONTRIBUTED PREDOMINANTLY TO TEACHER DISSATISFACTION. SUBGROUPS OF TEACHERS TENDED NOT TO DIFFER IN THEIR RESPONSES TO SOURCES OF JOB SATISFACTION AND JOB DISSATISFACTION. (TC)

ED011089

SATISFACTION AND DISSATISFACTION OF TEACHERS

/FINAL REPORT/

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The research reported herein was performed pursuant to a contract with the United States Department of Health, Education, and Welfare, Office of Education.

ACKNOWLEDGMENTS

The first phase of the study, including the collection and processing of data and the writing of a preliminary report, was conducted while the researcher was in residence at the University of Rochester, Rochester, New York. The writing of the final report was done at the University of Illinois, Urbana, Illinois.

The writer wishes to gratefully acknowledge the assistance and advice of the following persons:

Dr. Robert B. Howsam, formerly Professor of Education and Associate Dean at the University of Rochester and now Dean of the College of Education, University of Houston. (Professor Howsam made numerous suggestions on behalf of this research and is responsible for the addition of most recent attitude sequences to the Herzberg design);

Dr. Henry E. Butler. Jr., Associate Professor of Education, University of Rochester;

Dr. Jerome P. Lysaught, Assistant Professor of Education, University of Rochester; and

Dr. John Brophy, Professor of Business Administration, University of Rochester.

ABSTRACT

Purpose

The impetus for this investigation comes from the work of Frederick Herzberg, Bernard Mausner, and Barbara Snyderman, as reported in their book, The Motivation to Work. Herzberg investigated factors which accounted for job satisfaction and job dissatisfaction of accountants and engineers. He found that some factors in the work situation were satisfiers when present but not dissatisfiers when absent; other factors were dissatisfiers, but when eliminated as dissatisfiers would not result in positive motivation. Further, the satisfaction factors were found in the work itself and the dissatisfaction factors were found in the environment of work.

The purpose of this study was to test the Herzberg findings with teachers. Two questions were proposed for investigation:

1. Is there a set of factors which tends to satisfy teachers and another set of factors which tends to dissatisfy teachers or are the factors arranged on a conceptual continuum with each being a potential satisfier and dissatisfier?

2. Will the distribution of factors vary for sub groups of teachers? (Sub groups include: (1) male v. female teachers, (2) tenure v. non tenure teachers, and (3) elementary school v. secondary school teachers.)

Procedure

Basic to the design was the collection of sequences judged by respondents to be representative of their job feelings. Each sequence consisted of three phases: (1) The respondent's attitudes expressed in terms of high or low job feelings, (2) the first-level and second-level factors which accounted for the expressed attitudes, (3) the effects of these attitudes as reported by respondents. Through content analysis, the factors were sorted into predetermined categories which were developed and used by Herzberg. The effects were sorted and categorized in the same manner.

One hundred and twenty-seven teachers were selected at random from the 3,682 teachers who comprised the suburban teacher population of Monroe County, New York. Seventy-one of the 127 teachers agreed to participate in the study. Each respondent, in an interview situation, related four sequences. The four sequences consisted of: (1) unusual high attitude, (2) unusual low attitude, (3) recent high attitude,

(4) recent low attitude. Two hundred and eighty-four sequences were collected and analyzed for the study. The chi squared test of significance was used to test for mutual exclusiveness of factors.

Results

The findings of this study revealed that some factors, reported by teachers as contributing to their job satisfaction and job dissatisfaction, were polar in a positive direction and other factors were polar in a negative direction. Achievement, recognition, and responsibility were factors which contributed predominantly to teacher job satisfaction. Interpersonal relations (subordinates), interpersonal relations (peers), supervision technical, school policy and administration, personal life, status, and unfairness were factors which contributed predominantly to teacher dissatisfaction.

Sub groups of teachers tended not to differ in their responses to sources of job satisfaction and job dissatisfaction. There were only three exceptions, out of one hundred and sixty-eight possibilities, to this tendency.

Conclusions

It was concluded that factors which contribute to job satisfaction and factors which contribute to job dissatisfaction are not arranged on a conceptual continuum. Further, the satisfaction factors identified for teachers tend to focus on the work itself and the dissatisfaction factors tend to focus on the conditions of work. More specifically, the elimination of the dissatisfiers (conditions of work factors) does not result in teacher job satisfaction. However, the emergence of work itself factors, which do contribute to teacher job satisfaction, is dependent on the elimination or reasonable tempering of the factors which contribute to job dissatisfaction. The results of this study tend to support the universality of Herzberg's findings.

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CHAPTER I

THE NATURE OF THE INVESTIGATION

The subject of this research is teachers' job attitudes and those factors in the teaching task and situation with which they are associated. The impetus for the research comes from the work of Frederick Herzberg and his associates, Bernard Mausner and Barbara Snyderman.[1] The Herzberg study is significant on two accounts; the research method used in the study is unlike previous studies of job satisfaction-job motivation, and the provocative results of the study, if found to have universal application, may require a reassessment of present assumptions and practice in personnel administration. (A general introduction to the Herzberg study will be presented in this chapter, and a more detailed abstract of the study will be presented in Chapter II.)

BACKGROUND

In a review of motivation and productivity studies, Herzberg observed that a difference in the primacy of work factors appeared depending upon whether the investigator was searching for factors which led to job satisfaction or factors which led to job dissatisfaction.[2] This observation led to the concept that some factors in the work situation were "satisfiers" and other factors were "dissatisfiers." Herzberg hypothesized that some factors were satisfiers when present but not dissatisfiers when absent; other factors were dissatisfiers, but when eliminated as dissatisfiers would not result in positive satisfaction.

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[1] Frederick Herzberg, Bernard Mausner, and Barbara Snyderman, The Motivation to Work (New York: John Wiley and Sons, 1959).

Herzberg's research[3] with accountants and engineers tends to confirm the existence of the satisfier and dissatisfier phenomena. The Herzberg subjects were asked to identify periods of time when feelings about their jobs were unusually high or unusually low. They were then asked to describe the circumstances that resulted in the attitudes identified. Finally, subjects were asked how the factors reported and the attitudes identified affected their performance. The identification of factors was not dependent upon _a priori_ judgments, but was derived directly from the analysis of reported incidents. Sixteen factors were identified. The incidents solicited from subjects were then sorted, through content analysis, into the sixteen factors.

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[2] Frederick Herzberg _et. al._, _Job Attitudes_ (Pittsburg: Psychological Service of Pittsburg, 1957).

[3] Herzberg, _Motivation to Work_.

Herzberg found that five factors (achievement, recognition, work itself, responsibility, and advancement) tended to affect job attitudes in only a positive direction. The absence of these factors did not necessarily result in job dissatisfaction. The eleven remaining factors, if not present, led to employee dissatisfaction. The elimination of these factors as dissatisfiers tended not to lead to employee satisfaction. Herzberg observed that the factors which resulted in satisfaction were directly related to the work itself. Job factors which resulted in dissatisfaction were related to the environment of work. The list of factors, in their two sub-categories, are as follows:

Satisfiers

(found in the work itself)

1. Achievement
2. Recognition
3. Work itself
4. Responsibility
5. Advancement

Dissatisfiers

(found in the environment of work)

1. Salary
2. Possibility of growth
3. Interpersonal relations (subordinates)
4. Status
5. Interpersonal relations (superiors)
6. Interpersonal relations (peers)
7. Supervision-technical
8. Company policy and administration
9. Working conditions
10. Personal life
11. Job security

Though arrived at empirically, the Herzberg findings appear to be consistent with the motivational theory proposed by Maslow.[4] Maslow hypothesized a hierarchy into which needs arranged themselves in order of their appearance. The Maslow hierarchy of needs, in order of primacy, is as follows: physiological needs, security needs, social needs, esteem needs, and the need for self actualization. Needs that are at or near the top of the hierarchy, assuming that lower order needs are met, will tend to be the focus of an individual's attention. As the lower order needs are satisfied, they cease to motivate the individual; in our society the physiological and security needs are well met for most people, thus they do not motivate behavior.

Herzberg identified two levels of needs for his subjects; hygienic needs (which tend to focus on the dissatisfaction factors identified in his study) and satisfaction needs (which tend to focus on the satisfaction factors identified). According to Herzberg if hygienic needs are not met, the individual is unhappy. Provision for hygienic needs, however, does not ensure increased motivation. The satisfaction needs have motivational potential but depend upon reasonable satiation of hygienic needs before they become operative.[5]

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[4] A. H. Maslow, Motivation and Personality (New York: Harper and Bros., 1954).

[5] Herzberg, The Motivation to Work, pp. 113-119.

Herzberg's findings have important implication for educational administration and supervision. They suggest that much of present practice in personnel administration may be directed at controlling the hygienic conditions which have, at best, limited motivating power for professional teachers.

STATEMENT OF PURPOSE

Further testing of the Herzberg hypothesis is needed, both in the sense of replication and of application to different populations. Herzberg cautions, "the nature of the population studied will exert a strong effect on the results."[6] Before the Herzberg findings could be considered relevant to education, it would be necessary to test the findings on populations of school personnel. The purpose of this study was to test the Herzberg findings with teachers.

THE PROBLEM

The problem investigated in this research was, do the factors reported by teachers distribute themselves into mutually exclusive satisfaction and dissatisfaction categories? If the satisfaction-dissatisfaction phenomenon exists for teachers, will the factors resulting in satisfaction be concerned with the work itself, and will the factors resulting in dissatisfaction be concerned with the environment of work?

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[6] Ibid., p. 109.

Emerging from the problem were the following questions:

1. Is there one set of factors which tends to satisfy teachers and another set of factors which tends to dissatisfy teachers? Or are there factors better described as being arranged on a continuum with each being a potential satisfier and dissatisfier?

2. Will the distribution of factors vary for sub populations of teachers?

Null Hypotheses

1. When teachers respond to the Herzberg factors, there is no significant difference between the proportion of times a given factor is reported as a satisfier and the proportion of times the *same factor* is reported as a dissatisfier.

2. There is no significant difference between subgroups of teachers in the proportion of times each factor is reported as a satisfier and the proportion of times each factor is reported as a dissatisfier. (Sub groups include: (1) Male teachers v. female teachers, (2) tenure teachers v. non-tenure teachers, (3) elementary school teachers v. secondary school teachers).

Assumptions

1. The factors and effects categories developed, defined and used by Herzberg[7] in his study were used for the purposes of this investigation. Inherent in their use was the assumption that the stories and incidents solicited from teachers would indeed fit the existing categories. This assumption appeared to be supported by existing studies on job attitudes of teachers, which showed empirical and *a priori* lists essentially similar to the Herzberg factors.

2. A further assumption was that teachers could place their feelings about their jobs on a continuum and report extremes of this continuum to the interviewer. It was also assumed that teachers would be able to recall, without difficulty, most recent high and most recent low job feelings.

Limitations

1. The study was limited by the conscious self understanding of participants and the frankness with which they responded to the interview. Assured anonymity of respondents and calculated probing by the interviewer were used in attempting to control this limitation.

2. Subjects were asked to identify extremes of feelings about their jobs and report the circumstances

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[7] *Ibid.*

that accounted for these feelings. The limitation of this technique was whether factors reported were representative of the individual's general storage of feelings and factors. The introduction of most recent high feelings and most recent low feelings were added to Herzberg's design in an attempt to balance this limitation.

Delimitation

1. The study was concerned [illegible]ification of attitude extremes. No attempt was made to discriminate finer than unusually high and unusually low feelings and most recent high and most recent low feelings.

DEFINITION OF TERMS

For the purposes of the study, terms were defined as follows:

1. Sequence of events: One description or story as told by respondents. The sequence included factors, attitudes and affects. "High sequence" referred to stories based on high respondent feelings. "Low sequence" referred to stories based on low respondent feelings.

2. Attitudes: The subject's expression of high feelings about his job or low feelings about his job constituted his job attitudes.

3. First level factors: "An objective element of the situation in which the respondent finds a source for his good or bad (high or low) feelings about his job."[8]

4. Second level factors: "These categorize the reasons given by respondents for their feelings; they may be used as a basis for inferences about the drives or needs which are met or which fail to be met during the sequence of events."[9]

5. Effects: The changes in respondents' behavior and respondents' reported results of factors and attitudes reported in the sequence of events.

6. Satisfier: A factor which operates in only a positive direction to alter an individual's job satisfaction. Absence of this positive factor would tend not to result in dissatisfaction.

7. Dissatisfier: A factor which operates in only a negative direction to alter an individual's job dissatisfaction. Absence of this negative factor would tend not to result in satisfaction.

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[8] Ibid., p. 44.

[9] Ibid., p. 28.

CHAPTER II

REVIEW OF THE LITERATURE

Since this study is essentially a replication of Herzberg[1] and an application of his method and findings to a population of teachers, the point of departure will be the Herzberg study. Presented in this chapter will be a brief background for this study, an account of the Herzberg study, upon which this research is based, and a review of related non educational studies. These studies will serve as a frame of reference through which educational studies will be examined.

BACKGROUND

In his annual review of job satisfaction research Robinson[2] notes that education continues to be the area of concentration for job satisfaction studies. Robinson states that over forty per cent of the studies reviewed relate to teachers and their job satisfaction or morale. A deficiency in job satisfaction research in education is noted by Robinson as follows:

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[1] Frederick Herzberg, *et. al.*, *The Motivation to Work* (New York: John Wiley and Sons, 1959).

[2] Alan Robinson, *et. al.*, "Job Satisfaction Researches of 1963," *Personnel and Guidance Journal*, XLIII (1964) p. 361.

> Almost fifty per cent of the [education] studies focused on the construction and/or administration of questionnaire-type inventories and surveys. No interview studies were reported even though Herzberg "frowns" upon questionnaires and suggests depth interviews as the best approach.[3]

According to Herzberg,[4] measurements of job satisfaction or dissatisfaction are usually approached in one of three ways. The first method, illustrated by Hoppock[5] in his investigation of demographic variables, requires the worker to express his feelings (job satisfaction) by answering direct questions regarding his attitude toward his job. The second method, illustrated by the Science Research Associates Employee Inventory,[6] utilizes scaled inventories of morale or attitude. In the third method, observation of the behavior of workers is substituted for specific morale measures. From observation, the investigator infers attitudes, feelings, and motives. This approach is exemplified by the Hawthorne study[7] which essentially deals with the observation of the effects of group pressures and supervisory practices on workers.

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[3] Ibid.

[4] Herzberg, op. cit., pp. 5-6.

[5] Robert Hoppock, Job Satisfaction (New York: Harper Bros., 1935).

[6] S.R.A., Employee Inventory (Chicago: Science Research Associates, 1951).

Herzberg also cites three common methods for determining the factors that affect job attitudes:

> An *a priori* list of factors can be presented to workers, who are then asked to rank or rate these factors as to desirability.
>
> Workers can be asked to indicate spontaneously what they like or dislike about their jobs.
>
> Multiple-item inventories or questionnaires may be administered.[8]

The Herzberg investigators chose to reject both scaled measures of attitudes and effects and observational techniques. Being cautious of the "Hawthorne effect," and fearing the fragmentary nature of scaled inventories, the investigators chose a course which attempts to investigate factors, attitudes and effects simultaneously.

---

[7] Fritz Roethlisberger and W. J. Dickson, *Management and the Worker* (Cambridge: Harvard University Press, 1947).

[8] Herzberg, *op. cit.*, p. 7.

HERZBERG STUDY ABSTRACT

The general hypothesis of the Herzberg study was that job factors leading to positive attitudes would differ from job factors leading to negative attitudes. More specifically, Herzberg hypothesized that some factors were satisfiers when present but not dissatisfiers when absent; other factors were dissatisfiers, but when eliminated as dissatisfiers did not result in positive motivation.

The Sample

The sample for the study included accountants and engineers from nine industrial concerns in the Pittsburg metropolitan area. "Accountant" and "engineer" were defined in terms of actual job activity rather than by job title. Accountants included employees involved in fiscal activities down to the lowest rank at which judgmental function was exercised. Engineer included individuals involved in design functions. Clerical workers and draftsmen were not included in either group. Subjects were randomly chosen from company-furnished lists of people who met the above criteria. If less than fifty people were available from any one company, all were selected for the study. No one was required to participate.

Interviewing Procedure

A letter, describing the general nature of the study was sent to all subjects prior to the interview. The interview format and technique used by the Herzberg investigators was semi-structured. The interviewer, although committed to a "structured" format, was permitted to probe to insure that each sequence consisted of factors, attitudes, and effects.

1. Specification of attitudes: The subject was asked to identify periods of time when his feelings about his job were unusually high or unusually low. One self identification consisting of high feelings and one self identification consisting of low feelings were required from each subject. Subjects were permitted, however, to volunteer additional sequences. Herzberg reported an average of 2.4 sequences per subject.

2. Factors in job attitudes: Each subject was asked to describe the actual occurrence which resulted in one of the attitudes (feelings) identified. This phase consisted of two parts. Part one, the first-level factors, consisted of the objective circumstances which occurred. Part two, the second-level factors, consisted of the reasons for the feelings identified.

3. Effects of the job attitudes: Each subject was asked to describe how his work was affected during the sequences he described.

Analysis of the Data

The technique of content analysis was applied to the sequences gathered in the interviews. The interviews were broken down into "thought units" which were defined as statements about a single event or condition that led to a feeling, a single characterization of feeling, or a description of a single effect. The five thousand thought units obtained were then categorized by independent judges into first-level factors, second-level factors, and effects groups. From this evolved a categorical scheme which is fully presented in Appendix E.

Following the development of the categories each interview was analyzed and coded, by independent judges, into the categorical scheme. From a sample of 203 subjects, a total of 476 sequences were accepted and coded. Each sequence was classified in terms of three dimensions: (1) the range of the sequence, short or long, (2) the direction of the feelings, high or low, (3) the relationship between the range of the sequence and the direction of feelings. There were six possible permutations of the three dimensions. The six groups were: (1) high, long-range, (2) low, long-range, (3) high short-range, of short duration of feelings, (4) high short-range, of long duration of feelings, (5) low short-range, of short duration of feelings, (6) low short-range, of long duration of feelings.

The Results

The results of the study are summarized in Tables I and II. In summarizing the first-level factors involved in high sequences, the authors stated:

> First, only a small number of factors, and these highly interrelated, are responsible for good feelings about the job. Second, all of the factors responsible for good feelings about the job relate to the doing of the job itself or to the intrinsic content of the job rather than to the context in which the job is done. Third, the good feelings about the job stemming from these factors are predominantly lasting rather than temporary in nature. Fourth, when good feelings about the job are temporary in nature, they stem from specific achievements and recognition of these specific achievements. Fifth, an analysis of second-level factors leads us to the conclusion that a sense of personal growth and of self actualization is the key to an understanding of positive feelings about the job. We would define the first-level factors of achievement-responsibility-work itself-advancement as a complex of factors leading to this sense of personal growth and self actualization....[9]

An analysis of the first-level factors involved in low sequences indicated that company policy and administration was the single most important factor leading to low feelings about the job. The authors summarized their analysis as follows:

> We have previously said that all the motivating factors focused on the job and that the factors that appeared infrequently in the high attitude stories could be characterized as describing the job context. It is just these job factors, company policy and administration, supervision (technical and human relations), and working conditions, that now appear as the job dissatisfiers. We can expand on the pre-

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[9] Herzberg, op. cit., p. 70.

TABLE I

HERZBERG STUDY: PERCENTAGE OF EACH FIRST-LEVEL FACTOR APPEARING IN HIGH AND LOW ATTITUDE SEQUENCES FOR THE TOTAL SAMPLE.

P.N.	Factor	High	Low
1.	Achievement	41*	7
2.	Recognition	33*	18
3.	Work itself	26*	14
4.	Responsibility	23*	6
5.	Advancement	20*	11
6.	Salary	15	17
7.	Possibility of growth	6	8
8.	Interpersonal relations (subordinates)	6	3
9.	Status	4	4
10.	Interpersonal relations (superiors)	4	15*
11.	Interpersonal relations (peers)	3	8*
12.	Supervision technical	3	20*
13.	Company policy and administration	3	31*
14.	Working conditions	1	11*
15.	Personal life	1	6*
16.	Job security	1	1

*Difference between Highs and Lows is significant at the .01 level.

TABLE II

HERZBERG STUDY: PERCENTAGE OF EACH SECOND-LEVEL FACTOR APPEARING IN HIGH AND LOW ATTITUDE SEQUENCES FOR THE TOTAL GROUP

P.N.	Factor	High	Low
1.	Achievement	59*	26
2.	Recognition	57*	19
3.	Possibility of growth	38	33
4.	Advancement	3	2
5.	Responsibility	20*	8
6.	Group feeling	10*	3
7.	Work itself	29*	13
8.	Status	18	10
9.	Security	7	9
10.	Fairness-unfairness	3	38
11.	Pride, guilt, inadequacy	9	14
12.	Salary	19	13

*Difference between Highs and Lows is significant at the .01 level.

> vious hypothesis by stating that the job satisfiers deal with the factors involved in doing the job, whereas the job dissatisfiers deal with the factors that define the job context....[10]

It appears that the Herzberg hypothesis is strongly confirmed. The Herzberg results suggest that factors which account for high job feelings do, indeed, differ from factors which account for low job feelings. In addition, it appears that factors concerned with the work itself, without exception, account for high job feelings while job context factors tend to account for low job feelings.

STUDIES ANALOGOUS TO HERZBERG

The Anderson Study

Anderson[11] replicated the Herzberg study using a population sample which consisted of three occupational levels. From a Veterans Administration Hospital in Utah, Anderson selected a sample consisting of thirty-nine registered nurses (the professional group), thirty-one workers in the engineering service of the hospital (the skilled group), and thirty-five unskilled hospital workers (the unskilled group). The Anderson study tends to support the universality of Herzberg's conclusions. Anderson's findings are illustrated in Tables III and IV and are summarized below.

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[10] Herzberg, op. cit., p. 82.

[11] Frederick Anderson, "Factors in Motivation to Work Across Three Occupational Levels" (Microfilmed Doctoral Thesis, The University of Utah, 1961).

In the first-level sequences for the unskilled sample, the dominant factors that assumed a more important role in the highs, as compared with the lows, were achievement, recognition, and responsibility. In the second-level sequences, the dominant factors were recognition*, achievement, responsibility, group feelings, and pride. For the first-level sequences in the lows, the dominant factors were inadequate salary, interpersonal relations (superior), interpersonal relations (peers), and company policy and administration.* In the low second-level sequences, the dominant factors were lack of growth opportunities and unfairness.*

In the first-level sequences for the skilled sample, the dominant factors in the highs, as compared with the lows, were achievement, recognition, and opportunities for growth. The second-level factors were recognition*, achievement, advancement, work itself, and pride. For the lows the dominant factors in first-level sequences were supervision-technical and company policy and administration. Second-level factors were lack of growth opportunities, low status, and unfairness.*

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*Difference between Highs and Lows is significant at the .05 level.

TABLE III

ANDERSON STUDY: PERCENTAGE OF EACH FIRST-LEVEL FACTOR APPEARING IN HIGH AND LOW ATTITUDE SEQUENCES FOR THE THREE SAMPLE GROUPS

Factor	Unskilled		Skilled		Professional		Total	
	High	Low	High	Low	High	Low	High	Low
1. Achievement	12	7	19		26	4	21	4
2. Recognition	69	27	35	3	43	23	46	21
3. Work itself		3	8	11	17	17	12	11
4. Responsibility	12				6	6	5	3
5. Advancement	6	7	12	14	9	2	9	7
6. Salary	12	20	12	11			6	8
7. Possibility of growth		3	19	4		4	6	4
8. Interpersonal relations (subordinates)		3			11	8	5	4
9. Status		3	4		3	4	3	3
10. Interpersonal relations (superiors)	25	27	53	50	14	31*	30	35
11. Interpersonal relations (peers)	6	17		4		8	1	9*
12. Supervision technical		30		29	3	2	1	17*
13. Company Policy and administration		40*	4	32	3	35*	4	36*
14. Working conditions		7	4	7		15	1	10
15. Personal life			4	7		8	1	6
16. Job security			8	4			3	1

The percentages total more than 100 per cent for any group since more than one factor can appear in any one sequence. Only the first high and first low sequence obtained from each respondent was used in computing chi-square.

*Difference between High and Lows is significant. Minimum P = .05.

TABLE IV

ANDERSON STUDY: PERCENTAGE OF EACH SECOND-LEVEL FACTOR APPEARING IN HIGH AND LOW ATTITUDE SEQUENCES FOR THE THREE SAMPLE GROUPS

Factor	Unskilled		Skilled		Professional		Total	
	High	Low	High	Low	High	Low	High	Low
1. Recognition	82*	20	58*	7	66	27	66*	20
2. Achievement	19	7	12		34	37	23	19
3. Possibility of growth		10		11		8		9
4. Advancement	6	3	12		3	2	6	2
5. Responsibility	25	3			11	6	11	4
6. Group feelings	19	3	4	4	17	15	13	8
7. Work itself	19	20	19	4	6	17	13	5
8. Status	19	13	8	21	6	10	8	14
9. Security		7	12	11	3	25*	5	16*
10. Fairness-unfairness	6	77*	12	79*	9	67*	9	73*
11. Pride, guilt, inadequacy	44	3	12	4	34	19	29	10
12. Salary	12	27	12	14	3		8	11

The percentages total more than 100 per cent for any group since more than one factor can appear in any one sequence. Only the first high and the first low sequence obtained from each respondent was used in computing chi-square.

*Difference between Highs and Lows is significant. Minimum P = .05.

In the first-level sequences for the professional sample, the dominant factors that were more important in the highs, as contrasted with the lows, were achievement and recognition. Second-level factors were recognition and responsibility. For the lows, the dominant first-level factors were interpersonal relations (superior)* and company policy and administration.*

The findings of Anderson generally substantiate the conclusions of Herzberg but with noticeable exceptions. The first-level factor interpersonal relations (superiors), a dissatisfier appearing in low attitude sequences for Herzberg, appeared as a high for Anderson's skilled sample. The second-level factor achievement, a Herzberg high, appeared as a low for Anderson's professional sample. Pride, guilt, inadequacy, a second-level factor, appeared in the three Anderson samples exclusively as a high. This factor was reported by Herzberg as a low.

In general, however, the "work itself" factors, achievement, recognition, advancement, and responsibility, tended to account for the high attitude sequences and the "environment of work" factors tended to account for low attitude sequences for the three samples investigated by Anderson.

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*Difference between Highs and Lows is significant at the .05 level.

The Lodahl Study[12]

In this study of job attitudes of workers, male auto assemblers and female electronics assemblers were studied by applying factor analysis to information obtained from content analysis of interviews. Although this study was not an intended replication of Herzberg, results of the studies are remarkably similar.

Dissatisfaction factors for both auto assemblers and electronics assemblers were essentially the same as the dissatisfiers reported by Herzberg for accountants and engineers. Quality-quantity conflict and tension were additions to the Herzberg list. Intrinsic job satisfaction, however, appeared as a dissatisfier for electronics assemblers but as a satisfier for auto assemblers.

Satisfiers for auto assemblers included feelings about own performance, responsibility, feedback, intrinsic job satisfaction, and satisfaction with fellow workers; for electronics assemblers the satisfiers were feelings about own performance, feedback, difficulty, plans, product knowledge, responsibility, and freedom from interferences.

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[12] Thomas Lodahl, "Patterns of Job Attitudes in Two Assembly Technologies," Administrative Science Quarterly, VIII (1964), 483-519.

The striking results of this study suggest that auto assemblers appear to be remarkably consistent, in need orientation, with people in higher level jobs. Female electronics workers also appear to possess the potential to be highly self motivated.

It appears that job satisfaction and job motivation are related to different aspects of the job, not only for the Herzberg and Anderson subjects, but also for auto and electronic assemblers.

THEORETICAL CONSIDERATIONS

March and Simon[13] suggest that job satisfaction influences an individual's decision to participate in a given organization, but does not affect very directly his decision to produce. In other words, factors that provide a level of happiness (satisfaction) for a given individual do not necessarily motivate him to work harder.

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[13] John March and Herbert Simon, Organizations (New York: John Wiley and Sons, 1958).

Extensive reviews of the literature on job satisfaction by Brayfield and Crockett[14], Herzberg et al[15], and Robinson[16], indicate rather clearly that job satisfaction itself does not necessarily induce increased production.

Collins[17] maintains that no intrinsic relationship exists between satisfaction and productivity. He suggests that both may be a function of a third variable, such as ambition or level of aspiration. His research tends to indicate that satisfaction and productivity are correlated only when caused by a third variable.

Lodahl makes a rather clear distinction between job satisfaction and job motivation. He equates job satisfaction with the factors and conditions Herzberg identified as dissatisfiers. Both agree that job satisfaction is present when job dissatisfaction is eliminated. Lodahl, however, describes job motivation as being:

> Goal directed in character in that it refers to factors that pull people toward performing well in

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[14] A. Brayfield and W. Crockett, "Employees Attitudes and Employee Performance," Psychological Bulletin, LII (1955) 396-424.

[15] Herzberg et al, Job Attitudes (Pittsburgh: Psychological Service, 1957).

[16] Robinson, loc. cit.

[17] Barry Collins, "An Experimental Study of Satisfaction. Productivity, Turnover, and Comparison Levels," (Microfilmed Doctoral Thesis, Northwestern University, 1963).

> order to achieve self esteem, recognition, and enjoyment of work itself.[18]

Indeed Lodahl would prefer to label the Herzberg satisfiers as job motivators and the Herzberg dissatisfiers as job satisfiers. Despite the apparent confusion in wording, the basic intent and meaning of Herzberg and Lodahl are similar. The distinction between job satisfaction and job motivation as Herzberg sees it is as follows:

> Man tends to actualize himself in every area of life, and his job is one of the most important areas. The conditions that surround the doing of the job cannot give him this basic satisfaction; they do not have the potentiality. It is only from the performance of a task that the individual can get the rewards that will reinforce his aspirations.[19]

Herzberg clearly equates the satisfiers identified in his study with job motivation:

> Since it is in the approach sense that the term motivation is commonly used, we designate the job factors as the motivators as opposed to the extra-job factors, which we have labeled the factors of hygiene. It should be understood that both kinds of factors meet the needs of the employee; but it is primarily the motivators that serve to bring about the kind of improvement that industry is seeking from its work force.[20]

Much of the job satisfaction-job dissatisfaction research, particularly in education, has failed to consider the strong possibility that some factors are indeed motivators while other factors contribute little to job motivation. In commenting on motivational study techniques, Lodahl cites a basic research flaw:

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[18] Lodahl, *op. cit.*, p. 487.

[19] Herzberg, *op, cit.*, p. 114.

[20] *Ibid.*

> Studies of motivation of workers have largely been limited to sources of job satisfaction, which is a relatively shallow level in the motivational hierarchy.[21]

An examination of Maslow's[22] theory of human motivation will serve to place the Herzberg and Lodahl studies in perspective. Maslow proposes a theory of human motivation which is characterized by five basic needs. These are physiological, safety, social, esteem, and self actualization. The five basic needs are related to each other and are arranged in a hierarchy of prepotency. Essentially, the most prepotent need occupies, and to a certain extent monopolized, an individual's attention while less prepotent needs are minimized. When a need is fairly well satisfied the next prepotent need emerges and tends to dominate the individual's conscious life. Gratified needs, according to this theory, are not active motivators of behavior.

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[21] Lodahl, op. cit. p. 483.

[22] A. H. Maslow, Motivation and Personality (New York: Harper and Bros., 1954).

Porter[23], in adapting the Maslow hierarchy of needs for his research, has eliminated physiological needs from the list. Presumably, the rationale for Porter's elimination of physiological needs is simply that in our society this category lacks the prepotency to motivate behavior for most people.

The assumption that lower order needs are well met and seldom motivate behavior appears to be supported by the research of Herzberg, Ledahl, and Anderson. Essentially, the lower order needs and perhaps even social needs approach the job satisfaction concept, while the higher order needs approach the job motivation concept.

STUDIES IN EDUCATION

Research on job attitudes in education has tended not to differentiate between factors which satisfy teachers and factors which dissatisfy teachers. The terms satisfaction and dissatisfaction indeed are used but are conceptualized on a continuum. The basic assumption of this premise is that if a dissatisfier is identified, providing for the elimination of the dissatisfier will result in teacher satisfaction. Or, if a satisfier is identified, failure to maintain the satisfaction condition will result in dissatisfaction.

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[23] Lyman Porter, "Attitudes in Management: Perceived Deficiencies in Need Fulfillment as a Function of Job Level," Journal of Applied Psychology, XLVI (1962) 375.

The Thorndike and Hagen study[24] is a major example of the "continuum" assumption in studying job satisfaction and dissatisfaction in education. Thorndike and Hagen presented an *a priori* list of satisfiers and dissatisfiers to a sample of teachers. The checklist was supplemented by a free response situation whereby subjects were permitted to volunteer factors that would be important in bringing into and keeping young men in teaching. The factor volunteered and checked by subjects were categorized into sources of satisfaction and dissatisfaction. In commenting on the distribution of factors, the authors state "only about one-third mentioned respect by the people of the community as a source of satisfaction. This is consistent with a subsequent finding that lack of respect was frequently mentioned as one source of dissatisfaction with work in teaching."[25]

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[24] Robert Thorndike and Elizabeth Hagen, *Characteristics of Men Who Have Remained in and Left Teaching*. Cooperative Research Program, United States Office of Education Number 574 (Washington: Government Printing Office, 1960).

[25] *Ibid.*

A summary of recent job satisfaction and job dissatisfaction studies in education, conducted by Thorndike[26], Rettig[27], McLaughlin[28], and Rudd[29], is presented in Table V. The table indicates an inconsistency in the factors that appear as satisfiers and the factors that appear as dissatisfiers. Salary, for example, appears on two occasions as a satisfier and on three occasions as a dissatisfier.

A careful study of the table suggests two important implications. Factors that are concerned with the inherent value of work itself do not appear in dissatisfaction categories, but only in satisfaction categories. Factors that are concerned with the conditions and environment of work appear more frequently in dissatisfaction categories than in satisfaction categories. This observation is similar to the observation made by Herzberg in a review of industrial studies.

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[26] Ibid.

[27] S. Rettig and B. Pasamanick, "Status and Job Satisfaction of Public School Teachers," School and Society, LXXXVII (1959) 113.

[28] J. McLaughlin and J. Shea, "California Teachers' Job Dissatisfaction," California Journal of Educational Research, XI (1960) 216.

[29] W. Rudd and S. Wiseman, "Sources of Dissatisfaction Among a Group of Teachers," British Journal of Educational Psychology, XXXIII (1962) 275.

TABLE V

SELECTED SATISFACTION AND DISSATISFACTION STUDIES IN EDUCATION

Thorndike satisfiers	Rettig Satisfiers	Thorndike dissatisfiers	McLaughlin dissatisfiers	Rudd dissatisfiers
1. Contact with young teachers	1. Intellectual stimulation	1. Low Salary	1. Clerical work	1. Low salary
2. Working with books and ideas	2. Freedom	2. Non-teaching duties	2. Low salary	2. Poor human relationships with staff
3. Salary-benefits	3. Respect of students	3. Large classes	3. Uninterested students	3. Lack of materials and equipment
4. Respected by community	4. Salary	4. Uninterested students	4. Supervisory duties	
	5. Security	5. Lack of materials and equipment	5. Lack of materials and equipment	5. Lack of time for professional work
	6. Status and prestige	6. No promotion opportunities		6. Low status
	7. Type of student	7. School board or community interference		
	8. Regular hours			

The majority of studies in job satisfaction and job dissatisfaction of teachers appear to provide only accidental differentiation between factors which tend to satisfy teachers and factors which tend to dissatisfy teachers. The basic assumption is that satisfaction and dissatisfaction are conceptualized on a continuum. If the Herzberg findings are acceptable for teachers, much of the research in job satisfaction of teachers and much of the practice based on this research may be of doubtful value.

CHAPTER III

METHODOLOGY

The over-all design of this study followed, with some additions and modifications, the design developed and used by Herzberg. Basic to the design was the collection of incidents judged by respondents to be representative of their job feelings. Each incident or sequence consisted of three phases: (1) the respondents' attitudes expressed in terms of high job feelings and low job feelings, (2) the first-level and second-level factors which accounted for these attitudes, (3) the effects of these attitudes and factors as reported by respondents. Through content analysis the factors which accounted for the expressed attitudes were sorted into the categories developed, defined, and used by Herzberg in the original study. The effects were sorted and categorized in the same manner.

Additions to and Omissions from the Herzberg Design

In addition to the Herzberg type most unusual high and most unusual low attitude sequences, subjects were required to relate most recent high and most recent low attitude sequences.[1] The four sequences were classified as follows: (1) unusual high attitude sequence, (2) unusual low attitude sequence, (3) recent high attitude sequence, (4) recent low attitude sequence. The addition of most recent high and most recent low attitude sequences to the Herzberg design was an attempt to modify the potential dramatic nature of extreme feelings and hopefully served to improve the representativeness of responses from an individual's general storage of feelings and factors. In the statistical analysis, no differentiation was made between unusual attitude sequences and recent attitude sequences.

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[1] The addition of most recent attitude sequences was suggested by Robert B. Howsam of the University of Rochester.

The inclusion of most recent attitude sequences seriously limited the value of coding stories into sequence range and duration of feelings categories. Most recent sequences tended to be exclusively short-range and of short duration of feelings. Thus, the potential value of coding sequence range and duration of feelings was reluctantly forsaken for hopefully improved validity in respondents' stories.

SAMPLING PROCEDURE

The Population

The population for this study consisted of teachers in school districts in Monroe County.* The districts ranged from semi-rural to suburban in orientation and in size from a teaching staff of 36 to a teaching staff of 528. The total sample population consisted of 3, 682 teachers.

The Sample

One hundred and twenty-seven respondents were selected at random from the 3,682 teachers who comprised the study population. The sample was drawn from lists furnished by each of the participating school districts. Administrators, guidance counselors, department chairmen not involved in actual teaching, librarians, supervisors, and other non-teaching personnel were not included in the sample.

Respondents were notified by mail of their selection and invited to participate in the study. Seventy-one of the 127 teachers agreed to participate. This initial communication with respondents included a description of the general nature of the study but did not include specifically the nature or content of the interview. Responents were then contacted by phone and interview arrangements were made. Interviews were conducted at schools, in the homes of respondents, and at the Universit of Rochester.

*Monroe County, New York

It seems appropriate to discuss sample size and its effect on the subsequent analysis of the data gathered. The primary interest of this study was high attitude and low attitude sequences and the factors which accounted for these attitudes. Two hundred eighty-four were collected for the study. The statistical analysis was based on the number of sequences rather than the number of respondents. Focusing on sequences was consistent with the method used by both Herzberg and Anderson.

The sample included thirty male teachers and forty-one female teachers. Elementary school positions were held by thirty-seven respondents and junior high or senior high school positions were held by thirty-four respondents. Thirty-seven of the seventy-one respondents held tenure appointments. Respondents ranged in age from twenty-one years to sixty-four years with the average age being thirty-seven and the median age being thirty-two. Years of teaching experience ranged from three months to thirty-six years with the average experience being nine years and the median experience being seven years.

INTERVIEWING PROCEDURE

At the beginning of the interview, the nature of the study was explained to the respondent and long-range sequences and short-range sequences were defined.[2] The interview outline was given to respondents for their inspection. Respondents who were judged to be somewhat apprehensive about the interview were told that if, upon completion of the interview, they had misgivings about participating in the study they were welcome to withdraw and keep the interview tape. None chose to accept this offer. All respondents were assured of complete anonymity.

Respondents were told that they could start with either a time when they had felt unusually high or good about their job or a time when they had felt unusually low or bad about their job. After the first unusual sequence each respondent was asked to give another. If he had previously given a high story, he was then asked for a low. The same procedure was followed for most recent high feelings and most recent low feelings.

Respondents were limited to four specific sequences; an unusual high attitude sequence, an unusual low attitude sequence, a most recent high attitude sequence, and a most recent low attitude sequence. As indicated earlier, this procedure differed from the procedure followed by Herzberg and Anderson, both of whom limited their respondents to unusual sequences only. Further, their respondents were permitted to relate as many unusual sequences as they wished; some respondents in the Herzberg study gave as many as four unusual attitude sequences and the average number of sequences per respondent was 2.4. The interview outline used in this study is included in Appendix B.

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[2] The subsequent analysis of data did not include a consideration of long-range and short-range sequences.

ANALYSIS OF THE INTERVIEWS

The technique of content analysis was used in coding each sequence. Herzberg[3] suggests two basic approaches to content analysis. The first is an *a priori* approach in which the analysis is based upon a predetermined categorical scheme. The second approach extracts the categories from the raw data itself. Herzberg chose the *a posteriori* approach which produced categories specifically related to the data collected in his study. Herzberg noted, however, that the resulting categorical scheme developed through the *a posteriori* approach was not very different from that which could have been derived from an analysis of the literature.[4]

The schema used for content analysis in this study was a direct adoption of the categories developed and used by Herzberg, and so represents an a priori approach, but one based on empirical evidence.

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[3] Frederick Herzberg, *et. al.*, *The Motivation to Work* (New York: John Wiley and Sons, 1959), p. 37.

[4] Herzberg, *op. cit.*, p. 38.

The First Level Factors

The objective events, the actual stories, which were reported by respondents as being the source of high or low feelings about their jobs were coded as first-level factors. The factors, as defined by Herzberg, are as follows:

> 1. Recognition. The major criterion for this category was some act of recognition to the person speaking to us. The source could be almost anyone: supervisor, some other individual in management, management as an impersonal force, a client, a peer, a professional colleague, or the general public. Some act of notice, praise, or blame was involved. We felt that this category should include what we call "negative recognition," that is, acts of criticism or blame. In our subcategories we differentiated between situations in which rewards were given along with the acts of recognition and those in which there were no concrete rewards. Note that we had many sequences in which the central event was some act, such as a promotion or a wage increase, which was perceived by the respondent as a source of feelings of recognition. These sequences were coded under "recognition second-level."
>
> One might ask, since we had a separate category for interpersonal relations, where we coded recognition and where we coded interpersonal relations? The defining characteristic was the emphasis on the act of recognition or on statements characterizing the nature of the interaction between the respondent and the supervisor, peer, or subordinate, we coded the sequence as a story involving interpersonal relations. When the emphasis was merely on the act of recognition, this was not done.
>
> 2. Achievement. Our definition of achievement also included its opposite, failure, and the absence of achievement. Stories involving some specifically mentioned success were put into this category and these included the following: successful completion of a job, solutions to problems, vindication, and seeing the results of one's work.

3. Possibility of Growth. The inclusion of a possibility of growth as an objective factor in the situation may sound paradoxical, but there were some sequences in which the respondent told us of changes in his situation involving objective evidences that the possibilities for his growth were not increased or decreased. An example of this is a change in status that officially included a likelihood that the respondent would be able to rise in a company, or the converse. For example, if a man moves from a craftsman's position to that of a draftsman, the new status opens up a previously closed door; he may eventually rise to the position of design engineer or perhaps even project engineer. When the respondent told us that this had been clearly presented to him as part of his change, then possibility of growth was certainly considered as a first-level factor. Similarly, when an individual was told that his lack of formal education made it impossible for him ever to advance in the company, "negative" possibility for growth was coded.

Possibility for growth, however, has another connotation. It includes not only the likelihood that the individual would be able to move onward and upward within his organization but also a situation in which he is able to advance in his own skills and in his profession. Thus, included in this category were stories in which a new element in the situation made it possible for the respondent to learn new skills or to acquire a new professional outlook.

4. Advancement. This category was used only when there was an actual change in the status or position of the person in the company. In situations in which an individual transferred from one part of the company to another without any change in status but with increased opportunities for responsible work, the change was considered an increased responsibility (for which we have a category) but not formally an advancement.

5. Salary. This category included all sequences of events in which compensation plays a role. Surprisingly enough, virtually all of these involve wage or salary increases, or unfulfilled expectation of salary increases.

6. Interpersonal Relations. One might expect that interpersonal relations would pervade almost all of the sequences. They do play a role, necessarily, in situations involving recognition or changes in status within the company

or company and management policies; however, we restricted our coding of interpersonal relations to those stories in which there was some actual verbalization about the characteristics of the interaction between the person speaking and some other individual. We set this up in terms of three major categories:

Interpersonal relations-superior
Interpersonal relations-subordinate
Interpersonal relations- peer

……

[For the purposes of this study, subordinates included students directly responsible to the teacher or in contact in any capacity with the teacher. Peers included fellow teachers of equal rank (supervising teachers were considered as superiors) and parents of students in the school or school district. The inclusion of both parents and teachers in the same category may have caused some pollution of the data relating to interpersonal relations (peers). However, teachers responded infrequently to interaction with fellow teachers as sources of high and low job feelings.]

7. Supervision-technical. Although it is difficult to divorce the characteristics of interpersonal relationships with one's supervisor from his behavior in carrying out his job, it seemed to us that it was not an impossible task. We were able, with a high degree of reliability among independent coders, to identify those sequences of events that revolved around the characteristics of interpersonal relationships and those, classified under the category supervision-technical, in which the competence or incompetence, fairness or unfairness of the supervisor were the critical characteristics. Statements about the supervisor's willingness or unwillingness to delegate the responsibility or his willingness or unwillingness to teach would be classified under this category. A supervisor who kept things humming smoothly and efficiently might both be reported as factors in a sequence of events that led to exceptional feelings about the job.

8. Responsibility. Factors relating to responsibility and authority are covered in this category, which includes those sequences of events in which the person speaking reported that he derived satisfaction from being given responsibility for his own work or for the work of others or being given new responsibility. It also includes stories in which there was a loss of satisfaction or a

negative attitude towards the job stemming from a lack of responsibility. In cases, however, in which the story revolved around a wide gap between a person's authority and the authority he needed to carry out his job responsitilities the factor identified was "company policy and administration." The rationale for this was that such a discrepancy between authority and job responsibilities would be considered evidence of poor management.

9. Company [School] policy and administration. This category describes those components of a sequence of events in which some over-all aspect of the company was a factor. We identified two kinds of over-all company policy and administration characteristics. One involved the adequacy or inadequacy of company organization and management. Thus, there can exist a situation in which a man has lines of communication crossing in such a way that he does not really know for whom he is working, in which he has inadequate authority for satisfactory completion of his task, or in which a company policy is not carried out because of inadequate organization of the work.

The second kind of over-all characteristic of the company involved not inadequacy but the harmfulness or beneficial effects of the company's policies. These are primarily personnel policies. These policies, when viewed negatively, are not described as ineffective, but rather as "malevolent."

10. Working conditions. This category was used for stories in which the physical conditions of work, the amount of work, or the facilities available for doing the work were mentioned in the sequence of events. Adequacy or inadequacy of ventilation, lighting, tools, space, and other such environmental characteristics would be included here.

11. Work itself. Work itself was used when the respondent mentioned the actual doing of the job or the tasks of the job as a source of good or bad feelings about it. Thus, jobs can be routine or varied, creative or stultifying, overly easy or overly difficult. The duties of a position can include an opportunity to carry through an entire operation or they can be restricted to one minute aspect of it.

12. *Factors in personal life.* As previously indicated, we did not accept sequences in which a factor in the personal life of an individual having nothing to do with his job was responsible for a period of good or bad feelings, even if these feelings affected the job. We did accept situations in which some aspect of the job affected personal life in such a way that the effect was a factor in the respondent's feelings about his job....

13. *Status.* It would have been easy to slip into the trap of inferring status consideration from other factors. For example, it might be considered that any advancement would involve a change in status and ought to be thus coded. This was not done. "Status" was coded only when the respondent actually mentioned some sign or appurtenance of status as being a factor in his feelings about the job.

14. *Job security.* Here again we were not dealing with feelings of security, since these were coded as second-level factors, but with objective signs of presence or absence of job security. Thus, we included such considerations as tenure and company stability or instability, which reflected in some objective way on a person's job security.[5]

The Second-Level Factors

The second-level factors were categories which constituted respondents' feelings as a result of the objective stories they had related and the attitudes they had identified. The analysis of second-level factors came primarily from respondents' answers to two questions: "Can you tell me more precisely why you felt the way you did?" and "What did these events mean to you?" One respondent related a story involving a merit salary increase as a source of good feelings about his job. When asked why he felt the way he did, he replied, "It meant that the administration or who ever was responsible for the increase felt that I was doing a good job." The first-level factor in this sequence was coded as salary. This was the objective occurrence. The second-level factor in this sequence, however, was coded as recognition. The respondent perceived the merit increase as a source of recognition.

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[5] Herzberg, *op. cit.*, pp. 44-49.

The second-level factors are defined in terms of their literal or common usage. The list of second-level factors, as used by Herzberg, is as follows:

1. Feelings of recognition
2. Feelings of achievement
3. Feelings of possible growth, blocks to growth, first-level factors perceived as evidence of actual growth
4. Feelings of responsibility, lack of responsibility or diminished responsibility
5. Group feelings: feelings of belonging or isolation, socio-technical or purely social
6. Feelings of interest or lack of interest in the performance of the job
7. Feelings of increased or decreased status
8. Feelings of increased or decreased security
9. Feelings of fairness or unfairness
10. Feelings of pride or of inadequacy or guilt
11. Feelings about salary*

*This factor was included to cover those situations in which the first-level factor was viewed primarily as a source of the things that money can bring. If an answer to the question, "Why did this promotion make you feel good?" was, "I like the idea of being able to make more money," then the second-level factor was coded "salary."[6]

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[6] Herzberg, op. cit., p. 50.

The Effects

The analysis of effects was generally dependent upon the procedure and effects categories developed by Herzberg. Five categories of effects were used, (1) performance effects, (2) turnover effects, (3) mental-health effects, (4) interpersonal relations effects, and (5) attitudinal effects.

The analysis of effects came primarily from respondents' answers to the following questions:

1. Did these feelings affect the way you did your job? How? How long did this go on?
2. Can you give me a specific example of the way in which your performance on the job was affected?
3. Did what happened affect your personally in any way?
4. Did what happened affect the way you felt about working in that school or that school district?
5. Did the consequences of what happened affect your career?
6. Did what happened change the way you felt about the teaching profession?

CODING PROCEDURE

The next step in the analysis of the interviews required that the factors contained in the high and low attitude stories of respondents be identified and coded into the categorical scheme. Further, since several factors could appear in a given story, the factor which contributed most to the expressed feeling was to be isolated for subsequent analysis.

Each sequence was coded, independently, but three of five judges. Judges included the investigator, three graduate students in educational administration, and one wife of a graduate student. Two of the five judges were women.

The training period for judges consisted of two phases. Phase one required the judges to become thoroughly familiar with the categorical scheme and the factors as defined by Herzberg. Judges were then brought together to listen to twelve sequences gathered in a pilot study. The judges coded the twelve sequences independently and discussed choices and disagreements. After two practice sessions, the judges felt sufficiently attuned to begin the actual analysis.

A total of 284 sequences were coded for the study. Coding decisions were classified as unanimous choice, majority choice, or consensus choice. Unanimous choice was a result of three judges agreeing in coding. Majority choice was a result of two judges agreeing and one disagreeing. The factor coded by the majority was accepted.

Three-way disagreement among coders constituted a consensus choice; the coders were required to listen to the sequence again and were forced to arrive at a consensus decision.

The coding choices of judges for each of the first 160 sequences are reported in Appendix C. For the first-level factors, there were 87 unanimous decisions, 69 majority decisions, and 4 consensus decisions. For the second-level factors, there were 96 unanimous decisions and 64 majority decisions. Three-way disagreements did not occur for the second-level factors.

Coding sheets for each respondent were tabulated by hand and data put on I.B.M. cards. The summary of the data and the statistical computation for H_2 was done at the University of Rochester Computing Center.[7] The statistical computation for H_1 was done manually.[8]

Figure 1 summarizes the basic features of the content analysis.

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[7] C. Reynolds, "CHOMOB: Chi Squares," (Rochester: University of Rochester Computing Center, File No. 11.9.504, 1964). (Mimeographed.)

[8] Quinn McNemar, *Psychological Statistics*. (New York: John Wiley and Sons, 1962), p. 225.

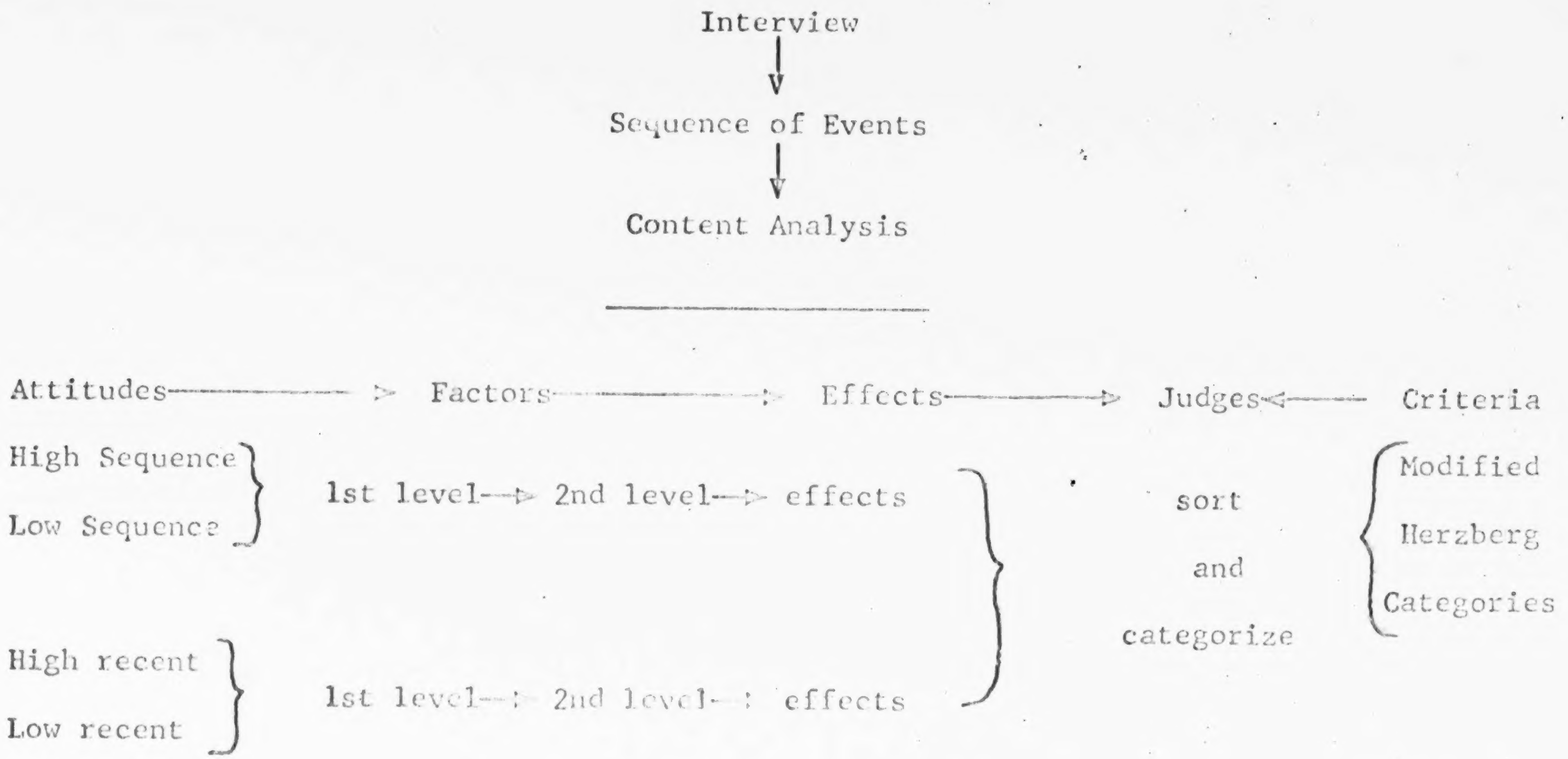
Interview
Sequence of Events
Content Analysis
Attitudes
Factors
Effects
Judges
Criteria
High Sequence
Low Sequence
1st level
2nd level
effects
sort
and
categorize
Modified
Herzberg
Categories
High recent
Low recent
1st level
2nd level
effects

Figure 1

Basic Design Features of the Content Analysis

CHAPTER IV

THE ANALYSIS OF RESULTS

The results of the study are presented in three sections. The first section reports the results relating to the mutual exclusiveness of factors for the total sample. This section includes an analysis of the first-level and second-level factors which appeared in high attitude sequences and an analysis of the first-level and second-level factors which appeared in low attitude sequences.

The second section presents the findings relating to sub-group differences for each factor. This section includes an analysis of the difference in responses for each factor for male teachers as compared with female teachers, tenure teachers as compared with non tenure teachers, and for elementary school teachers as compared with secondary school teachers.

The third section contains the results of the effects analysis.

RELATIONSHIP BETWEEN HIGH ATTITUDE FACTORS AND LOW ATTITUDE FACTORS

High Attitude Sequences

Table VI includes the percentage of each first-level factor which appeared in the 142 high attitude

TABLE VI

PERCENTAGE OF EACH FIRST-LEVEL FACTOR APPEARING IN HIGH ATTITUDE SEQUENCES FOR THE TOTAL GROUP

High Attitude Sequences		
	Factor	NS=142*
1.	Achievement	30
2.	Recognition	28
3.	Work itself	11
4.	Responsibility	7
5.	Advancement	0
6.	Salary	2
7.	Possibility of Growth	6
8.	Interpersonal relations (subordinates)	7
9.	Interpersonal relations (superiors)	3
10.	Interpersonal relations (peers)	1
11.	Supervision technical	1
12.	School policy and administration	2
13.	Working conditions	2
14.	Personal life	0
15.	Status	0
16.	Security	0

*NS in this table and in subsequent tables refers to number of sequences.

Percentages in this table and in subsequent tables are approximate **but** do not vary more than .0075.

sequences for the total sample. Sixty-nine per cent of the sequences which accounted for high job attitudes included the first-level factors achievement, recognition, and work itself. Responsibility appeared in seven per cent of the high attitude sequences. Advancement did not appear in the 142 high attitude stories.

First-level factors six through sixteen appeared in twenty-four per cent of the high attitude sequences. The major contributors to the twenty-four per cent were possibility of growth (6%), and interpersonal relations with subordinates (7%). Personal life, status, and security did not appear in high attitude sequences.

Percentages of second-level factors which appeared in high attitude sequences are presented in Table VII. Achievement, which appeared in fifty per cent of the sequences, was the dominant second-level factor for the highs. Recognition appeared in twenty-one per cent of the sequences involving high job feelings. The remaining factors appeared in twenty-nine per cent of the high attitude sequences. The major contributors to the twenty-nine per cent were work itself (6%) and possible growth (6%). The second-level factors advancement, status, salary, and fairness did not appear in high attitude sequences.

The 142 high attitude sequences for the total sample were dominated by the appearance of three first-

TABLE VII

PERCENTAGE OF EACH SECOND-LEVEL FACTOR APPEARING IN HIGH ATTITUDE SEQUENCES FOR THE TOTAL GROUP

	High Attitude Sequences
Factor	NS=142
1. Recognition	21
2. Achievement	50
3. Work itself	6
4. Possible growth	6
5. Advancement	0
6. Responsibility	4
7. Group feelings	3
8. Status	0
9. Security	5
10. Fairness-unfairness	0
11. Pride, guilt, inadequacy	5
12. Salary	0

level factors, achievement, recognition, and work itself. The analysis of second-level factors revealed two dominant factors, achievement and recognition.

Low Attitude Sequences

The percentage of each first-level factor which appeared in the 142 low attitude sequences for the total group is reported in Table VIII. Interpersonal relations (subordinates), interpersonal relations (peers), supervision technical and school policy and administration appeared in fifty-eight per cent of the low attitude sequences. Achievement, recognition, work itself, responsibility and advancement accounted for twenty-one per cent of the incidence of factors which appeared in the lows. Status did not appear in low attitude sequences.

Table IX presents the percentages of each second-level factor which appeared in low attitude sequences for the total group. Feelings of unfairness, with thirty-two per cent, was the dominant factor. Feelings of guilt and inadequacy, security, and work itself appeared in thirty-one per cent of the low sequences. Recognition with seven per cent and lack of achievement with thirteen per cent were other contributors to low job feelings. The remaining six factors appeared in fifteen per cent of the low sequences. The factor advancement did not appear in the lows.

TABLE VIII

PERCENTAGE OF EACH FIRST-LEVEL FACTOR APPEARING IN LOW ATTITUDE SEQUENCES FOR THE TOTAL GROUP

Factor	Low Attitude Sequences NS-142
1. Achievement	9
2. Recognition	2
3. Work itself	8
4. Responsibility	1
5. Advancement	1
6. Salary	3
7. Possibility of growth	2
8. Interpersonal relations (subordinates)	20
9. Interpersonal relations (superiors)	4
10. Interpersonal relations (peers)	15
11. Supervision technical	10
12. School policy and administration	13
13. Working conditions	6
14. Personal life	5
15. Status	0
16. Security	1

TABLE IX

PERCENTAGE OF EACH SECOND-LEVEL FACTOR APPEARING IN LOW ATTITUDE SEQUENCES FOR THE TOTAL GROUP

	Factor	Low Attitude Sequences NS=142
1.	Recognition	7
2.	Achievement	13
3.	Work itself	9
4.	Possible growth	3
5.	Advancement	0
6.	Responsibility	2
7.	Group feelings	3
8.	Status	5
9.	Security	11
10.	Fairness-unfairness	32
11.	Pride, guilt, inadequacy	11
12.	Salary	2

The dominant first-level factors which appeared in the 142 low attitude sequences for the total group were interpersonal relations (subordinates), interpersonal relations (peers), supervision technical, and school policy and administration. The dominant second-level factors were feelings of unfairness, lack of achievement, security, and feelings of guilt-inadequacy.

High Attitude Sequences Contrasted With Low Attitude Sequences

Table X includes the percentages and values of chi-squared for the frequency with which first-level factors appeared in high attitude sequences and low attitude sequences for the total group.

The first-level factors which appeared more often in high attitude sequences were achievement*, recognition*, work itself, responsibility*, and possibility of growth. The first-level factors which appeared more often in low attitude sequences were advancement, salary, interpersonal relations (subordinates)*, interpersonal relations (superiors), interpersonal relations (peers)*, supervision technical*, school policy and administration*, working conditions, personal life*, and security.

The percentages and values of chi-squared for the frequency with which second-level factors appeared in

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*Difference between Highs and Lows is significant. Minimum P=.05.

TABLE X

PERCENTAGES AND VALUES OF CHI SQUARED FOR THE FREQUENCY WITH WHICH EACH FIRST-LEVEL FACTOR APPEARED IN HIGH ATTITUDE SEQUENCES AS CONTRASTED WITH LOW ATTITUDE SEQUENCES FOR THE TOTAL GROUP

Factor	High NS=142	Low NS=142	Chi Squared	P
1. Achievement	30*	9	10.500	.01
2. Recognition	28*	2	30.139	.001
3. Work itself	11	8	.346	
4. Responsibility	7*	1	5.818	.05
5. Advancement	0	1		
6. Salary	2	3		
7. Possibility of growth	6	2	1.454	
8. Interpersonal relations (subordinates)	7	20*	7.605	.01
9. Interpersonal relations (superior)	3	4	.900	
10. Interpersonal relations (peers)	1	15*	14.086	.001
11. Supervision technical	1	10*	8.470	.01
12. School policy and administration	2	13*	10.227	.01
13. Working conditions	2	6	2.083	
14. Personal life	0	5*	5.142	.05
15. Status	0	0		
16. Security	0	1		

*Difference between Highs and Lows is significant. Chi Squared value required for significance at the .05 level is 3.841.

high attitude and low attitude sequences are reported in Table XI.

The second-level factors which appeared more often in high attitude sequences were recognition*, achievement*, and possible growth. The second-level factors which appeared more often in low attitude sequences were work itself, status, security, feelings of unfairness*, feelings of guilt and inadequacy, and salary.

Unusual Sequences Contrasted With Recent Sequences

Table XII presents the percentage of each significant first-level and second-level factor which appeared in unusual high and low attitude sequences as compared with recent high and low attitude sequences.

In general, differences between the appearance of factors in unusual as compared with recent attitude sequences were small. The major exception to this tendency was for the second-level factor "fairness-unfairness." This factor appeared in twenty per cent of the unusual low attitude sequences and in twelve per cent of the recent low attitude sequences.

Summary

The results presented in the first section demonstrate that many of the factors which accounted for high

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*Difference between Highs and Lows is significant. Minimum P =.05.

TABLE XI

PERCENTAGES AND VALUES OF CHI SQUARED FOR THE FREQUENCY WITH WHICH EACH SECOND-LEVEL FACTOR APPEARED IN HIGH ATTITUDE SEQUENCES AS CONTRASTED WITH LOW ATTITUDE SEQUENCES FOR THE TOTAL GROUP

Factor	High NS=142	Low NS=142	Chi Squared	P
1. Recognition	21*	7	9.025	.01
2. Achievement	50*	13	26.677	.001
3. Work itself	6	9	.190	
4. Advancement	0	0		
5. Responsibility	4	4		
6. Group feelings	3	3		
7. Possible growth	6	3	1.230	
8. Status	0	5*	5.1428	.05
9. Security	5	11	1.565	
10. Fairness-unfairness	0	32*	43.022	.001
11. Pride, guilt, inadequacy	5	11	2.782	
12. Salary	0	2		

*Difference between Highs and Lows is significant. Chi squared value required for significant at the .05 level is 3.841.

TABLE XII

PERCENTAGE OF EACH SIGNIFICANT FIRST-LEVEL AND SECOND-LEVEL FACTOR WHICH APPEARED IN UNUSUAL HIGH AND LOW ATTITUDE SEQUENCES AS COMPARED WITH RECENT HIGH AND LOW ATTITUDE SEQUENCES FOR THE TOTAL GROUP

First-Level Factor	High Attitude (NS=142)			Low Attitude (NS=142)		
	Unusual	Recent	Total	Unusual	Recent	Total
Recognition	13	15	28*	2	0	2
Achievement	15	15	30*	3	6	9
Responsibility	5	2	7*	1	0	1
Interpersonal relations (subordinates)	4	3	7	9	11	20*
Interpersonal relations (peers)	1	0	1	6	9	15*
Supervision technical	1	0	1	8	2	10*
School policy and administration	1	1	2	6	7	13*
Personal life	0	0	0	2	3	5*

Second-Level Factor	Unusual	Recent	Total	Unusual	Recent	Total
Recognition	11	10	21*	2	5	7
Achievement	23	27	50*	3	10	13
Fairness-unfairness	0	0	0	10	12	32*
Status	0	0	0	2	3	5*

*Difference between totals for Highs and Lows is significant. Minimum P=.05.

job feelings of teachers and many of the factors which accounted for low job feelings of teachers were mutually exclusive.

The hypothesis relating to the no difference in the proportion of times teachers report a given factor as a satisfier and the same factor as a dissatisfier was rejected for eight of the sixteen first-level factors and for three of the twelve second-level factors.

The first-level factors which appeared significantly as highs (as contrasted with lows) were recognition, achievement, and responsibility. The first-level factors which appeared significantly as lows (as contrasted with highs) were interpersonal relations (subordinates), interpersonal relations (peers), supervision technical, school policy and administration, and personal life.

Achievement and recognition were the second-level factors which appeared significantly as highs. Feelings of unfairness was the only second-level factor which appeared significantly as a low.

SUB GROUP DIFFERENCES FOR EACH FACTOR

Male Teachers Contrasted With Female Teachers

The percentages and values of chi-squared for the frequency with which first-level factors appeared in high attitude sequences for male respondents as compared with female respondents are presented in Table XIII. Three prominent differences in responses were noted in the high attitude sequences. Achievement and work itself appeared more often in female respondent high attitude stories. Recognition appeared more often in male respondent high attitude stories.

The differences between male and female responses for second-level factors which appeared in high attitude sequences are included in Table XIV. Males responded more often to responsibility and feelings of pride as sources of high job feelings. Females responded more often to work itself and achievement. None of the differences reported in Table XIII and Table XIV was significant.

Differences in responses of male teachers and female teachers for low attitude sequences are included in Table XV and Table XVI. The largest male-female response differences for first-level factors which appeared in low attitude sequences were personal life, interpersonal relations with peers, work itself, and supervision techni-

TABLE XIII

PERCENTAGES AND VALUES OF CHI SQUARED FOR THE FREQUENCY WITH WHICH EACH FIRST-LEVEL FACTOR APPEARED IN HIGH ATTITUDE SEQUENCES FOR MALES AS CONTRASTED WITH FEMALES

HIGH ATTITUDE SEQUENCES NS=142

Factor	Males NS=60	Females NS=82	Chi Squared	P
1. Achievement	10	20	1.9422	
2. Recognition	15	13	.5549	
3. Work itself	2	9	2.0861	
4. Responsibility	4	3	.8152	
5. Advancement	0	0		
6. Salary	1	1		
7. Possibility of growth	3	3		
8. Interpersonal relations (subordinates)	3	4	.0619	
9. Interpersonal relations (superiors)	0	3	1.3792	
10. Interpersonal relations (peers)	½	½		
11. Supervision technical	1	0		
12. School policy and Administration	1	1		
13. Working conditions	1	1		
14. Personal life	0	0		
15. Status	0	0		
16. Security	0	0		

TABLE XIV

PERCENTAGES AND VALUES OF CHI SQUARED FOR THE FREQUENCY WITH WHICH EACH SECOND-LEVEL FACTOR APPEARED IN HIGH ATTITUDE SEQUENCES FOR MALES AS CONTRASTED WITH FEMALES

High Attitude Sequences NS=142

Factor	Males NS=60	Female NS=82	Chi Squared	P.
1. Recognition	8	13	.0031	
2. Achievement	20	30	.0048	
3. Work itself	1	5	.6909	
4. Advancement	0	0		
5. Responsibility	3	1	.7430	
6. Group feelings	1	2	.2634	
7. Possible growth	3	3	.0005	
8. Status	0	0		
9. Security	2	3	.0021	
10. Fairness-unfairness	0	0		
11. Pride, guilt, inadequacy	4	1	1.5793	
12. Salary	0	0		

TABLE XV

PERCENTAGES AND VALUES OF CHI SQUARED FOR THE FREQUENCY WITH WHICH EACH FIRST-LEVEL FACTOR APPEARED IN LOW ATTITUDE SEQUENCES FOR MALES AS CONTRASTED WITH FEMALES

Low Attitude Sequences NS=142

	Factor	Male NS=60	Female NS=82	Chi Squared	P
1.	Achievement	4	5	.0970	
2.	Recognition	1	1		
3.	Work itself	2	6	.4155	
4.	Responsibility	1	0	.0321	
5.	Advancement	1	0	.0321	
6.	Salary	2	1	.7600	
7.	Possibility of growth	1	1		
8.	Interpersonal relations (subordinates)	9	11	.0002	
9.	Interpersonal relations (superiors)	2	2		
10.	Interpersonal relations (peers)	4	11	.9825	
11.	Supervision technical	3	7	.1342	
12.	School policy and administration	6	7	.1053	
13.	Working conditions	3	3		
14.	Personal life	1	4	.0891	
15.	Status	0	0		
16.	Security	1	0	.0321	

TABLE XVI

PERCENTAGES AND VALUES OF CHI SQUARED FOR THE FREQUENCY WITH WHICH EACH SECOND-LEVEL FACTOR APPEARED IN LOW ATTITUDE SEQUENCES FOR MALES AS CONTRASTED WITH FEMALES

Low Attitude Sequences NS=142

Factor	Male NS=60	Female NS=82	Chi Squared	P
1. Recognition	4	3	.8152	
2. Achievement	7	6	.6513	
3. Work itself	2	7	.7486	
4. Advancement	0	0		
5. Responsibility	1	3	.2634	
6. Group feelings	1	2	.0029	
7. Possible growth	2	1	.7600	
8. Status	1	4	.0891	
9. Security	3	8	.8196	
10. Fairness-unfairness	13	19	.0002	
11. Pride, guilt, inadequacy	5	6	.0023	
12. Salary	2	0	.9500	

cal (cited more often by women teachers).

For second-level factors which appeared in low attitude sequences minor differences are noted for work itself (cited more often by women) and salary (cited more often by men).

Tenure Teachers Contrasted With Non Tenure Teachers

Table XVII and Table XVIII include the first-level and second-level factors which appeared in high attitude sequences for tenure teachers as compared with non tenure teachers. Large idfferences were noted for interpersonal relation (subordinates) and achievement. These factors were reported as sources of high job feelings more often by non tenure teachers. Tenure teachers cited responsibility and possible growth more often than non tenure teachers.

Second-level factors recognition, responsibility and pride appeared in a larger percentage of tenure high attitude sequences. Possible growth, and security were cited more frequently as sources of high job feelings for non tenure teachers. None of the findings reported in Table XVII and Table XVIII was significant.

Differences in responses of tenure teachers and non tenure teachers for low attitude sequences are included in Table XIX and Table XX. The first-level factor interpersonal relations (superiors) appeared more frequently as

TABLE XVII

PERCENTAGES AND VALUES OF CHI SQUARED FOR THE FREQUENCY WITH WHICH EACH FIRST-LEVEL FACTOR APPEARED IN HIGH ATTITUDE SEQUENCES FOR THE TENURE GROUP AS CONTRASTED WITH THE NON TENURE GROUP

High Attitude Sequences NS=142

Factor	Tenure	Non Tenure	Chi Squared	P
	NS=74	NS=68		
1. Achievement	13	17	.9290	
2. Recognition	15	13	.0500	
3. Work itself	6	5	.0283	
4. Responsibility	5	2	.6898	
5. Advancement	0	0		
6. Salary	2	0		
7. Possibility of growth	4	2	.9131	
8. Interpersonal relations (subordinates)	2	5	1.2163	
9. Interpersonal relations (superiors)	1½	1½		
10. Interpersonal relations (peers)	0	1		
11. Supervision technical	1	0		
12. School policy and administration	1	1		
13. Working conditions	1	1		
14. Personal life	0	0		
15. Status	0	0		
16. Security	0	0		

TABLE XVIII

PERCENTAGES AND VALUES OF CHI SQUARED FOR THE FREQUENCY WITH WHICH EACH SECOND-LEVEL FACTOR APPEARED IN HIGH ATTITUDE SEQUENCES FOR THE TENURE GROUP AS CONTRASTED WITH THE NON TENURE GROUP

High Attitude Sequences NS=142

Factor		Tenure NS=74	Non Tenure NS=68	Chi Squared	P
1.	Recognition	13	8	.5201	
2.	Achievement	25	25		
3.	Work itself	3	3		
4.	Advancement	0	0		
5.	Responsibility	3	1	1.2866	
6.	Group feelings	1	2	.0091	
7.	Possible growth	2	4	.6513	
8.	Status	0	0		
9.	Security	1	4	3.6716	
10.	Fairness-unfairness	0	0		
11.	Pride, guilt, inadequacy	4	1	2.0133	
12.	Salary	0	0		

TABLE XIX

PERCENTAGES AND VALUES OF CHI SQUARED FOR THE FREQUENCY WITH WHICH EACH FIRST-LEVEL FACTOR APPEARED IN LOW ATTITUDE SEQUENCES FOR THE TENURE GROUP AS CONTRASTED WITH THE NON TENURE GROUP

Low Attitude Sequences NS=142

Factor	Tenure NS=74	Non Tenure NS=68	Chi Squared	P
1. Achievement	4	5	.0244	
2. Recognition	1	1		
3. Work itself	6	2	1.1840	
4. Responsibility	1	0	.0102	
5. Advancement	1	0	.0102	
6. Salary	2	1	.1754	
7. Possibility of growth	2	0	1.1843	
8. Interpersonal relations (subordinates)	8	12	1.5174	
9. Interpersonal relations (superiors)	4*	0	3.8427	.05
10. Interpersonal relations (peers)	4	11*	6.1061	.05
11. Supervision technical	5	5		
12. School policy and administration	8	5	.5776	
13. Working conditions	3	3		
14. Personal life	3	2		
15. Status	0	0		
16. Security	0	1		

*Difference between Tenure and Non Tenure Groups is significant. Minimum value of chi squared for significance at the .05 level is 3.841.

TABLE XX

PERCENTAGES AND VALUES OF CHI SQUARED FOR THE FREQUENCY WITH WHICH EACH SECOND-LEVEL FACTOR APPEARED IN LOW ATTITUDE SEQUENCES FOR THE TENURE GROUP AS CONTRASTED WITH THE NON TENURE GROUP

Low Attitude Sequences NS=142

Factor	Tenure NS=74	Non Tenure NS=68	Chi Squared	P
1. Recognition	4	3	.0346	
2. Achievement	6	7	.0364	
3. Work itself	6	3	.5417	
4. Advancement	0	0		
5. Responsibility	2	2		
6. Group feelings	3	0	2.0359	
7. Possible growth	3	0	2.0359	
8. Status	4	1	2.0133	
9. Security	2	9*	5.2560	.05
10. Fairness-unfairness	18	14	.1165	
11. Pride, guilt, inadequacy	3	8	2.1376	
12. Salary	1	1	.0102	

*Difference between Tenure and Non Tenure Groups is significant. Minimum value of chi squared for significance at the .05 level is 3.841.

a source of low job feelings for tenure teachers. This finding was significant. Interpersonal relations (peers) appeared more frequently as a source of low job feelings for non tenure teachers. This finding was significant. Non significant, but large, first-level factor differences appeared for work itself and possible growth (tenure teachers), and interpersonal relations with subordinates (non tenure teachers).

For second-level factors appearing in low attitude sequences, security appeared more often as a source of low job feelings for non tenure teachers. This finding was significant. Non signficant, but large, differences occurred for lack of possible growth, status and group feelings. Tenure teachers tended to report them as sources of low job feelings more often than non tenure teachers.

Elementary School Teachers Contrasted with Secondary School Teachers

The first-level factors which appeared in high attitude sequences for elementary and secondary school teachers are included in Table XXI and Table XXII. Elementary school teachers responded to work itself as a source of high job feelings more often than secondary school teachers. Other elementary-secondary school teacher response differences were small.

TABLE XXI

PERCENTAGES AND VALUES OF CHI SQUARED FOR THE FREQUENCY WITH WHICH EACH FIRST-LEVEL FACTOR APPEARED IN HIGH ATTITUDE SEQUENCES FOR ELEMENTARY TEACHERS AS CONTRASTED WITH SECONDARY TEACHERS

High Attitude Sequences NS=142

Factor	Elementary NS=74	Secondary NS=68	Chi Squared	P
1. Achievement	17	13	.2951	
2. Recognition	13	15	.3651	
3. Work itself	7	4	.6571	
4. Responsibility	3½	3½		
5. Advancement	0	0		
6. Salary	1	1		
7. Possibility of growth	2	4	.2933	
8. Interpersonal relations (subordinates)	3½	3½		
9. Interpersonal relations (superiors)	1½	1½		
10. Interpersonal relations (peers)	1	0		
11. Supervision technical	0	1		
12. School policy and administration	1	1		
13. Working conditions	1	1		
14. Personal life	0	0		
15. Status	0	0		
16. Security	0	0		

Minumum value of Chi Squared for significance at the .05 level is 3.841.

TABLE XXII

PERCENTAGES AND VALUES OF CHI SQUARED FOR THE FREQUENCY WITH WHICH EACH SECOND-LEVEL FACTOR APPEARED IN HIGH ATTITUDE SEQUENCES FOR ELEMENTARY TEACHERS AS CONTRASTED WITH SECONDARY TEACHERS

High Attitude Sequences NS=142

Factor	Elementary NS=74	Secondary NS=68	Chi Squared P
1. Recognition	10½	10½	
2. Achievement	27	23	.0047
3. Work itself	4	2	.2355
4. Advancement	0	0	
5. Responsibility	1	3	.3257
6. Group feelings	1	2	
7. Possible growth	4	2	
8. Status	0	0	
9. Secuirty	4	1	.8026
10. Fairness-unfairness	0	0	
11. Pride, guilt, inadequacy	1	4	.8782
12. Salary	0	0	

Minimum value of Chi Squared for significance at the .05 level is 3.841.

Second-level factors work itself, achievement, possible growth and security appeared in a larger proportion of high attitude sequences for elementary school teachers. Secondary school teachers tended to respond more frequently to responsibility and pride as sources of high job feelings. None of the differences reported in Table XXI and in Table XXII was significant.

Table XXIII and Table XXIV present the percentage of each first-level and second-level factor which appeared in low attitude sequences for elementary and secondary school teachers. The first-level factors interpersonal relations (subordinates) and school policy and administration did appear as more potent sources of low job feelings for secondary school teachers. Interpersonal relations (peers) and supervision technical appeared more frequently in low attitude sequences for elementary school teachers.

Responsibility, status and guilt and inadequacy were second-level factors which appeared more frequently as sources of low job feelings for elementary school teachers. Secondary school teachers responded more frequently to security and unfairness as sources of low job attitudes. None of the findings reported in Table XXIII and in Table XXIV was significant.

TABLE XXIII

PERCENTAGES AND VALUES OF CHI SQUARED FOR THE FREQUENCY WITH WHICH EACH FIRST-LEVEL FACTOR APPEARED IN LOW ATTITUDE SEQUENCES FOR ELEMENTARY TEACHERS AS CONTRASTED WITH SECONDARY TEACHERS

Low Attitude Sequences NS=142

Factor	Elementary	Secondary	Chi Squared	P
	NS=74	NS=68		
1. Achievement	4	5	.0549	
2. Recognition	1	1		
3. Work itself	4	4		
4. Responsibility	1	0		
5. Advancement	0	1		
6. Salary	1½	1½		
7. Possibility of growth	1	1		
8. Interpersonal relations (subordinates)	9	11	.9069	
9. Interpersonal relations (superiors)	1	3	.3257	
10. Interpersonal relations (peers)	11	4	2.2962	
11. Supervision technical	7	3	.6571	
12. School policy and administration	5	8	.5815	
13. Working conditions	4	2	.2355	
14. Personal life	3	2		
15. Status	0	0		
16. Secuirty	1	0		

Minimum value of chi squared for significance at the .05 level is 3.841.

TABLE XXIV

PERCENTAGES AND VALUES OF CHI SQUARED FOR THE FREQUENCY WITH WHICH EACH SECOND-LEVEL FACTOR APPEARED IN LOW ATTITUDE SEQUENCES FOR ELEMENTARY TEACHERS AS CONTRASTED WITH SECONDARY TEACHERS

Low Attitude Sequences NS=142

Factor	Elementary	Secondary	Chi Squared	P
	NS=74	NS=68		
1. Recognition	3	4	.2778	
2. Achievement	6	7	.0821	
3. Work itself	5	4		
4. Advancement	0	0		
5. Responsibility	3	1	.5790	
6. Group feelings	2	1		
7. Possible growth	2	1		
8. Status	4	1	.3562	
9. Security	4	7	.6153	
10. Fairness-unfairness	15	17	.6242	
11. Pride, guilt, inadequacy	7	4	.2623	
12. Salary	2	0		

Minimum value of Chi Squared for significance at the .05 level is 3.841.

Summary

The analysis of results presented in section two strongly suggests that sub-groups of teachers tend not to differ in their responses to sources of high and low job feelings.

The hypothesis relating to no difference in responses of sub-groups of teachers for the proportion of times each factor is reported as a satisfier and the proportion of times each factor is reported as a dissatisfier was accepted with few exceptions. Significant differences were found in only three of 168 possibilities.

Men teachers tended _not_ to respond differently than women teachers to sources of high and low job attitudes. No significant exception to this tendency was found.

Tenure teachers and non tenure teachers tended _not_ to differ in their responses to sources of high and low job feelings. Three significant exceptions to this tendency were found:

1. The first-level factor interpersonal relations (superiors) appeared as a source of low job feelings for tenure teachers in four per cent of the one hundred forty-two low attitude sequences. This factor did not appear as a source of low job feelings for non tenure teachers
2. Eleven per cent of the low attitude sequences involved non tenure teachers citing the first-level factor interpersonal relations (peer) as a source of low job attitudes. This was in contrast to four per cent for tenure teachers.

3. Security, a second-level factor, appeared in eleven per cent of the low attitude sequences. Nine of the eleven per cent were cited by non tenure teachers.

Elementary school teachers and secondary school teachers tended not to differ in their responses to sources of high job attitudes and low job attitudes. No significant exception to this tendency was found.

ANALYSIS OF EFFECTS

The analysis of effects was seriously limited by the apparent immunity, expressed by respondents, to penetration of feelings. With the exception of positive performance effects, teachers tended to respond infrequently to effects of job attitudes. This opaqueness on the part of teachers was manifested by the frequent remark, "I don't let my feelings about my job affect me personally or my work." Because of the apparent lack of success in this effort, no tests of significance were performed in the effects analysis.

Each of the effects categories--performance, mental health, turnover, interpersonal relationships, and attitudinal--discussed below include the frequency of teachers that did not mention the category and the frequency and type of positive and negative effects reported by teachers.

Performance Effects

Performance effects were not mentioned in 42 of the 284 sequences. No change in performance was reported in sixteen of the high sequences and in forty of the low sequences. The incidence of positive performance effects as a result of high job feelings was one hundred fifteen. The incidence of negative performance effects as a result of low job feelings was fifty-nine. Twelve respondents reported improved performance as a result of low job feelings. (Table XXV)

TABLE XXV

PERFORMANCE EFFECTS

	High	Low
Not mentioned	11	31
No change	16	40
	Positive	Negative
Frequency of Response	115	59

*Positive effects were reported on twelve occasions in low sequences.

Turnover Effects

Thought of quitting as a result of low job feelings appeared in 27 of the 142 low attitude sequences. Four teachers actually quit their jobs. Five respondents reported that as a result of high feelings they would not quit now. Turnover effects were not mentioned in 244 of the 284 sequences. (Table XXVI)

TABLE XXVI

TURNOVER EFFECTS

		High		Low
Not mentioned		135		99
Frequency of Response	Would not quit now		Quit	Thought of quitting
	5		4	27

Mental Health Effects

Increased tension was reported in 45 of the 142 low attitude sequences. Psychological improvement as a result of high job feelings was reported in 44 of the 142 high attitude sequences. Improvement in tension symptoms appeared once in low attitude sequences. One hundred and seventy-four sequences did not contain mental health effects. (Table XXVII)

TABLE XXVII

MENTAL HEALTH EFFECTS

	High	Low	
Not mentioned	98	76	
	Improvement	Psychosomatic	Tension
Frequency of Response	44	9	55

*Improvement in tension symptoms appeared once in low attitude sequences.

Interpersonal Relationships Effects

One hundred seventy sequences did not contain interpersonal relationships effects. Positive effects as a result of high job feelings appeared on fifty-seven occasions. The incidence of negative effects as a result of low job feelings was fifty-three. Four respondents reported positive effects as a result of low job attitudes. (Table XXVIII)

TABLE XXVIII

INTERPERSONAL RELATIONSHIP EFFECTS

	High	Low
Not mentioned	89	81
	Positive	Negative
Frequency of Response	53	57

*Four low attitude sequences contained positive effects.

Attitudinal Effects

Attitudinal effects were not reported in 115 sequences. The incidence of positive effects toward the supervisor was nine; toward the school, fifty-nine; and toward the profession, twenty-seven. The incidence of negative effects toward the supervisor was twenty-four, toward the school was twenty-three, and toward the profession was seven. Seventeen low attitude sequences contained reports of positive effects. (Table XXIX)

TABLE XXIX

ATTITUDINAL EFFECTS

	High	Low
Not mentioned	44	71
	Positive	Negative
Supervisor	9	24
School	59	23
Profession	27	7

*Seventeen low attitude sequences contained positive effects.

Summary

Performance effects were most frequently cited as being vulnerable to job feelings. One hundred fifteen of the 142 high attitude sequences resulted in improved performance. Fifty-nine of the low attitude sequences contained reports of negative performance.

Although turnover effects were infrequently reported in the 284 sequences, 19 per cent of the low attitude sequences contained thought of quitting as an effect. About three per cent of the teachers actually quit their jobs.

Tension appeared as the dominant mental health effect of job feelings. Tension symptoms improved in thirty per cent of the high attitude sequences and increased in thirty-eight per cent of the low attitude sequences.

There was little difference in the appearance of effects on interpersonal relationships between high attitude and low attitude sequences. Effects on interpersonal relationships appeared in fifty-three high attitude sequences and in fifty-seven low attitude sequences.

The number of attitudinal effects was greater in high sequences than in low sequences. The only exception was in attitudinal effects toward the supervisor. This category appeared in seventeen per cent of the low sequences and in six per cent of the high sequences.

CHAPTER V

DISCUSSION OF FINDINGS

Frederick Herzberg,[1] as a result of an intensive review of job satisfaction research in industry, observed that studies dealing with job satisfaction revealed factors which were different from studies dealing with job dissatisfaction. This observation led to a study which specifically investigated the mutual exclusiveness of satisfaction and dissatisfaction factors.

Herzberg[2] found that achievement, work itself, recognition, responsibility, and advancement were factors which primarily led to job satisfaction for the accountants and engineers in his sample. These were the factors which accounted for high job feelings reported by his respondents. Interpersonal relations (superiors), supervision technical, company policy and administration and working conditions were factors which primarily accounted for low job attitudes. These were the factors which appeared predominantly in low attitude sequences.

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[1] Frederick Herzberg, et. al., Job Attitudes: Review of Research and Opinion. (Pittsburg: Psychological Service of Pittsburg, 1957).

[2] Frederick Herzberg, et. al., The Motivation to Work. (New York: John Wiley and Sons, 1959).

The remaining factors, salary, possibility of growth, interpersonal relations (subordinates), interpersonal relations (peers), personal life and job security were primarily bi-polar in nature. These factors did not appear predominantly in accountant-engineer high or low job attitude sequences.

Herzberg concluded that not all job factors contribute to satisfaction if met and to dissatisfaction if not met. Indeed, he found that many of the factors were mutually exclusive, some contributing to satisfaction if present but not to dissatisfaction if not present, and others contributing to dissatisfaction but not satisfaction.

This study tested the Herzberg hypothesis with teachers. The findings showed that some factors, reported by teachers as contributing to their job satisfaction and job dissatisfaction, were polar in a positive direction and other factors were polar in a negative direction. The polarity of factors was generally consistent with the findings of Herzberg in that satisfaction factors were related to the work itself and dissatisfaction factors were related to the environment of work.

Chapter V is divided into three sections. The first two sections discuss the findings relating to the hypotheses tested in the study. The analysis of the effects is found in section three.

THE POLARITY OF FACTORS

The results of this study indicated that achievement, recognition, and responsibility were factors which contributed predominantly to teacher job satisfaction. Interpersonal relations (subordinates), interpersonal relations (peers), supervision technical, school policy and administration, personal life, and fairness-unfairness were factors which contributed predominantly to teacher job dissatisfaction. The remaining factors appeared to be bi-polar, possessing the potential to contribute to both satisfaction and dissatisfaction (many of the factors did not appear with sufficient frequency to adequately test for polarity).

The Satisfaction Factors

The three dominant factors which appeared in high attitude sequences were achievement, recognition and responsibility. Achievement and recognition appeared as first-level factors in fifty-eight per cent of the 142 high attitude sequences. This is compared with their appearance in only eleven per cent of the low attitude sequences.

Responsibility appeared in seven per cent of the high attitude sequences as opposed to one per cent of the low sequences.

Achievement appeared as a second-level factor in one out of two high attitude sequences. Recognition appeared three times as often in high sequences than in low sequences.

Sources of recognition for teachers varied. Teachers talked about feedback from principals, supervisors, parents, students, and fellow teachers. Recognition took the form of letters, oral statements, gifts, incentives, and committee appointments.

The need for recognition, the overt bolstering of self-esteem, appears to be important to teachers. The absence of recognition tends not to affect low job attitudes of teachers.

The dominant need, expressed by teachers as being most important in contributing to their job satisfaction, was achievement. The finding that much of the reward for teaching comes from a feeling of personal success was not surprising. The nearly complete domination of the high sequences by the factor achievement, however, was most interesting.

One interpretation of this finding is that teachers in the study sample appear to possess a need for high achievement. Accepting this interpretation for the moment, we might indeed compare teachers with behavior that appears to be related to "n" achievement. McClelland[3] has clearly linked "n" achievement with entrepreneurial role behavior.* He argues that individuals who display entrepreneurial role behavior have high "n" achievement.[4]

Entrepreneurial role behavior, as proposed by McClelland, is characterized as follows:

1. Moderate risk-taking as a function of skill, not chance; decisiveness
2. Energetic and/or novel instrumental activity
3. Individual responsibility
4. Knowledge of results of decisions
   Money as a measure of results
5. Anticipation of future possibilities
6. Organizational skills[5]

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[3] David McClelland, The Achieving Society. (New York: D. Van Nostrand Co., 1961).

*McClelland clearly distinguishes between incumbents of entrepreneurial roles and role behavior. An incumbent may not necessarily display entrepreneurial role behavior or such behavior may be displayed by individuals not in an entrepreneurial role.

[4] Ibid., p. 207.

[5] Ibid.

The job of teaching does not appear to offer an exact fit for the characteristics of entrepreneurial role behavior. However, teaching does afford many opportunities for such behavior.

Moderate risk-taking as a function of skill was an ideal fit for some of the achievement-centered stories. One high school teacher related a story involving a more permissive approach to teaching. Her students, after deciding on a problem to investigate, were given complete freedom for one week to research, prepare, and present the topic. Sutdents were permitted to use the regular class time in any way that they wished. The teacher issued *carte blanche* passes to students which permitted them to meet in study rooms, visit the library, or to do whatever they wished in lieu of attending regular classes. The teacher placed herself completely in the role of consultant to students and performed the role only at their request.

The teacher talked about considerable skepticism on the part of students, fellow teachers and administrators. She even considered cancelling her experiment. This thought occurred to her when, upon touring the building during the regular class hour, she found many of her students engaged in group sessions which were not characterized by the academic diligence she had expected. She considered her experiment as a highlight of her teaching career.

The incident related above does not compare with a dramatic business decision involving thousands of dollars or with a life and death decision faced by a surgeon. The incident does suggest, however, that the tasks of teaching may be broad enough to include elements of moderate risk-taking as an example of entrepreneurial role behavior.

Teaching appears also to offer many opportunities for energetic or novel instrumental activity. The achievement stories gathered in the study had as their theme challenge, difficulty, originality, innovation, risk, and success.

Sutton describes individual responsibility as a characteristic of entrepreneurial role behavior as follows:

> Responsibility of this sort implies individualism. It is not tolerable unless it embraces both credit for successes and blame for failures and leaves the individual free to claim or accept the consequences, whatever they may be.[6]

Teachers indeed do assume considerable individual responsibility for their professional actions, but it is doubtful if they can or are permitted to assume such definitive responsibility.

The remaining characteristics of entrepreneurial role behavior proposed by McClelland are even more difficult to justify as being able to flourish within the framework of teaching. Teachers, in general, are content with rather vague indications of the long-range effects of their professional decisions. Much of the work of the teacher (as it relates to other professionals) is done in relative isolation, affording few, if any, opportunities for the development and displaying of organizational skills.

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[6] F. X. Sutton, "Achievement Norms and the Norms of Entrepreneurs." Quoted in McClelland, op. cit., p. 229.

It should be clear to the reader that, in this discussion, a successful attempt to link high "n" achievement with the teaching profession has not been made. Although there were some indications of entrepreneurial role behavior in teacher achievement centered high attitude stories, the case has not been established. The feasibility of even remotely linking "n" achievement with teaching is discounted by Zaleznik and Moment as follows:

> Need achievement, [sic] is a global, rather than a specific [,] concept, [sic] implying a need to succeed irrespective of particular means. Thus, scientists, authors, and artists could be just as strong in their needs to achieve as would the most extreme case of the stereotype of the rising executive. The concept transcends particular occupations and professions, although there is no doubt that particular cultures and groups would tend to channel the need into relatively limited means. A person with high need achievement would normally follow culturally prescribed roads to success. It western cultures, this would tend to

> out such occupations as the ministry, education, or social work for people who really want to be "successful."[7]

The fact still remains, however, that achievement did dominate the high attitude sequences gathered in this study.

A more plausible explanation for the predominance of the factor achievement excludes the possibility of equating the achievement success of teachers with high "n" achievement. Lortie argues that societal rewards (salary, prestige, and power) are, in general, not perceived by teachers as being in abundance. Thus, teachers tend to focus on psychic gratification as a primary source of reward in their work. One of the major sources of psychic gratification, according to Lortie, is the interaction that the teacher has with individual students and classes where the teacher perceives that something has happened. The teacher senses or believes that, as a result of his activity, a change has taken place in the student or class. Lortie cites the terms "I reached them," "It went today," as being common expressions used by teachers to descirbe this phenomena.[8]

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[7] Abraham Zaleznik and David Moment, *The Dynamics of Interpersonal Behavior*. (New York: John Wiley and Sons, 1964), p. 389.

This psychic gratification, which is characterized by a task-oriented interaction with some perceived measurable result, was most typical of many of the success stories related by teachers.

Further, teachers appear to have limited opportunities to receive tangible evidence of their success. The pupil gain criterion, for example, affords a vague measure of teacher success. Teachers have little control over intervening variables (students' abilities, maturation rates, home environment, and previous educational experiences) which affect their pupils' performance. The job of teacher tends also to involve fragmented goals and objectives. As students progress through the school year, they move through various steps of the finishing process. At the end of the school year, students are moved to the next step for further processing.

When teachers do have an opportunity to experience tangible success, their expressed elation is overwhelming.

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[8] Dan C. Lortie, "The Changing Role of Teachers as a Result of Such Innovations as Television, Programmed Instruction, and Team Teaching." Richard Lonsdale and Carl Steinhoff (editors), The Administrative Analysis of Selected Educational Innovations. (Report of the First Inter-University Conference for School Administrators), Syracuse University, 1964.

Such was the case with two music teachers who reported, in high achievement centered stories, that they derived tremendous personal satisfaction from successful music programs offered to their respective communities.

Most of the teacher achievement centered stories, however, involved less concrete evidence of actual success and more sensing and feeling, on the part of the teacher, that the student had been reached and presumably was affected in some positive way.

Responsibility, although significantly found to be a high, appeared in only seven per cent of the high attitude sequences. This percentage is small when one considers that teachers do assume a considerable amount of responsibility. As the classroom door closes behind the teacher, it implied that she assumes responsibility for her own work. This responsibility is limited, however, and falls within the framework of the rules and regulations of the school, school district, and school board. Further limits are imposed by the state legislature and our society at large. Whatever responsibility a teacher assumes, in terms of what to teach, falls within the framework of the prescribed curriculum.

There may be some question as to whether prescriptive responsibility, described above, can be equated with individual responsibility as described by Sutton.[9]

Perhaps, even more interesting than the appearance of achievement, recognition and responsibility as positive polar factors was the absence of advancement and work itself. These factors did appear as satisfiers in Herzberg's study.[10]

The factor advancement was not mentioned by teachers in high attitude stories. Teaching offers little opportunity for concrete advancement (change in status or position) and in fact could be considered as a terminal position. Whatever potential the factor advancement has as a satisfier appears to be lost for teachers under our present system. Capitalizing on this factor, as a potential source of satisfaction, implies providing overt opportunities for advancement within the ranks of teachers.*

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[9] *Supra*., p. 92.

[10] Herzberg, *The Motivation to Work*.

*Schools frequently contain an informal promotion system for teachers. Advancement within the informal promotion system may include movement to another grade level, being assigned "quality" students, receiving equipment and facility priorities, and moving to a better school within the district. This informal promotion system was not described in teacher high attitude sequences but did appear in low attitude sequences. Judges coded these low attitude sequences into the factor categories working conditions or school policy and administration.

Work itself appeared as a bi-polar factor in the study. Although the factor appeared more frequently in teacher high attitude stories, it also appeared as a frequent source of low job feelings. It appears that the job of teacher (although potentially able to provide unlimited opportunity for creative and varied work) requires considerable attention to maintenance type activity. Routine or maintenance tasks range from attendance and scheduling details, daily health checks, study hall assignments, and lunch duty to blowing noses and pouring young scholars into snow suits. The work itself factor, although found to be rich in satisfaction potential, was frequently cited as a source of dissatisfaction for teachers.

The Dissatisfaction Factors

The factors which appeared as dissatisfiers for teachers, but tended not to contribute to job satisfaction, had as their theme interpersonal relations with students, parents, and fellow teachers, supervisory practices and abuses, school policy and administration, low status and factors in personal life. Being treated unfairly was perceived by respondents as being the greatest source of dissatisfaction.

Supervision technical and school policy and administration were factors which appeared in twenty-three per cent of the low attitude sequences and in three per cent of the high attitude sequences. The stories containing these factors focused on considerable disenchantment and disillusionment with supervisory behavior (or lack of behavior) of superiors and the impersonal and frequently inconsistent sting of school policies and administrative directives.

New teachers told about not receiving adequate attention and help unless something went wrong. One teacher, who had confronted her principal for help, told about being received with considerable reluctance on the part of a busy principal who was preoccupied with more important things. Another teacher related a story about initial enthusiasm for a merit-salary plan which was initiated by the faculty but within three years (according to this teacher's perceptions) was twisted and distorted by the administration to serve its own interests.

In commenting about the behavior of principals operating in the simulated Whitman School, Hemphill, Griffiths, and Frederiksen conservatively noted:

> Awareness of poor work occurred about twice as often as recognizing good work, possibly because

> more poor work than good work of subordinates was presented in in-baskets.[11]

In further discussion the behavior of Whitman School principals, the authors state:'

> Another set of unused categories is also of interest. The set includes Improves Working Conditions, Improves Staff, and Backs Up Staff. The principals gave practically no indication of being interested or concerned with the well being of their teaching staffs. While this lack of concern may be an artifact of the simulation, the lack is so nearly complete that it does not seem as though this is the only reason.[12]

The behavior of Whitman School principals described above appears to be consistent with the behavior of many of the principals and supervisors described by teachers in this study.

Interpersonal relations with parents and fellow teachers was a factor which appeared in fifteen per cent of the low attitude sequences and in only one per cent of the high attitude sequences. Most of the stories, which contained this factor, involved parents. Parents were cited as jumping to unwarranted conclusions, attempting to usurp the teachers authority, meddling in professional affairs, being unreasonable, and refusing to accept or misinterpreting criticism directed toward their children.

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[11] J. Hemphill, D. Griffiths, and N. Frederiksen. Administrative Performance and Personality (New York: Bureau of Publications, Teachers College, Columbia University, 1962), p. 105.

[12] Ibid., p. 346.

The factor interpersonal relations (subordinates) appeared in twenty per cent of the high and in seven per cent of the lows. It seems appropriate to assume that, since students are the very crux of a teacher's work, they should account for many of the successes and good feelings that teachers have. Indeed, this is so. The students were the raw material for the achievement successes and acts of recognition which teachers perceived as sources of great satisfaction. Yet the personal relationship between students and teachers appeared as a troublesome source of teacher job dissatisfaction.

Bidwell argues that the role structure of school systems contains a basic dichotomy between teacher and student roles. Since teachers enter their roles voluntarily, general acceptance of school values is assumed. Students, on the other hand, are compelled to enter the school system. Acceptance of the values of the school cannot be assumed for students and may, in fact, be rejected by students.[13]

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[13] Charles Bidwell, "The School as a Formal Organization." John March (ed.), Handbook of Organizations, (Chicago: Rand McNally, 1965), p. 973.

Bienenstok and Sayres, in studying job satisfaction of junior high school teachers, list the following traits of students as being cited by about one-half of their sample:

> Junior high pupils are pictured as a group whose immaturity requires special guidance, yet whose members want to be treated as adults; who show refreshing spontaneity and buoyancy and who work hard for teachers that they like, yet are not much interested in subject matter, and who tend to be unstable and changeable.[14]

This inconsistent, somewhat "weather-like," behavior of students can be a frequent source of puzzlement and despair for teachers.

A good deal of the energy of teachers is expended in "winning over" the student. Using the writings of Willard Waller, Bidwell suggests that the task of teaching demands affective bonds between teacher and student. Thus, teachers tend to sell the school and its values to students. According to Bidwell, this requires particularistic behavior on the part of the teacher. At the same time, the role of teacher requires a certain amount of universalistic impersonal behavior. Judging student progress, for example, would presumably be an objective, impersonal task.[15]

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[14] T. Bienenstok and W. Sayres, "Problems in Job Satisfaction Among Junior High School Teachers," New York State Education Department, Albany, New York, 1963. p. 25.

The dichotomy between student and teacher roles, compounded by the ambivalence of "universalistic" and "particularistic" behavior of teachers in dealing with students, suggests the criticalness of the factor interpersonal relations with students. With this factor appearing in twenty-one per cent of the eighty low attitude sequences, we have an indication of the intensity of the problems discussed above.

Establishing an appropriate relationship with students is critical. Once established, the teacher can capitalize on this relationship in pursuit of work centered or job itself satisfaction. A happy relationship with students is not in itself potent enough to be a source of job satisfaction. A poor relationship with students, however, can be a source of considerable teacher dissatisfaction.

Personal life appeared as a dissatisfier in five per cent of the low attitude sequences but did not appear in the 142 high attitude sequences. Sequences containing this factor were reported more frequently by women and tended to suggest conflict between home life and school life.

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[15] Willard Waller, The Sociology of Teaching, (New York: John Wiley and Sons, 1932). Cited by Charles Bidwell, op. cit., p. 979.

One teacher, for example, related a story which resulted in considerable dissatisfaction with herself and her job. She reported that for the third straight day one of her children was home sick. She said that she had already taken a number of days off from school and could not afford to miss another day. Although she felt that the sick child had a more than adequate "baby-sitter," she wanted to be with the child and felt strongly that the child needed her.

Being treated unfairly was perceived as a source of teacher job dissatisfaction in one out of three low attitude sequences. Fair treatment, however, did not appear in high attitude sequences. Teachers cited being treated unfairly most frequently in stories which included the first-level factor school policy and administration. Interpersonal relationships with parents was another major contributor to perceived feelings of unfairness reported by teachers.

Unusual and Recent Sequences

The analysis of factors which appeared in unusual as contrasted with recent sequences revealed, in general, few differences. For low attitude sequences, supervision technical and feelings of unfairness appeared more frequently in unusual attitude sequences. Interpersonal relations (subordinates) appeared more frequently in recent sequences.

It appears that supervision technical and perceived feelings of unfairness have the potential to be long remembered by teachers as sources of low feelings. Interpersonal relationships with students, however, (perhaps because they occur more frequently) appear not to have this lasting potential.

RESPONSES OF SUB GROUPS TEND NOT TO DIFFER

A most interesting finding of the study was that sub groups of teachers--tenure and non tenure, male and female, elementary and secondary--tended not to differ in their responses to sources of job satisfaction and dissatisfaction. There were only three exceptions, out of 168 possibilities, to this tendency. All three involved tenure and non tenure teachers.

Non tenure teachers responded to interpersonal relations with fellow teachers and parents, and feelings of insecurity as sources of low job attitudes more frequently than did tenure teachers.

Tenure teachers appeared to have the ability to ignore or overcome perceived distasteful commentary by parents. Non tenure teachers, however, were undoubtedly more threatened by parents.

It appears that non tenure teachers are acutely aware of their non tenure status. This seems to be reflected in their apparent insecurity in interacting with supervisors, parents, and fellow teachers, and students. Further, it appears that non tenure teachers are searching for some indication of their present acceptance and their subsequent appointment as tenure teachers.

Tenure teachers, however, responded more frequently to interpersonal relations with superiors as a source of low job feelings. Perhaps as teachers gain in competence and confidence and are afforded the security of tenure, they tend to exert independence which may result in interpersonal conflict with superiors.

Elementary school and secondary school teachers tended not to differ in their responses to sources of high and low job attitudes. No significant exception to this tendency was found.

The sparse differences noted in this section strongly suggest that the satisfaction factors and dissatisfaction factors identified in the study apply to teachers irrespective of their sex, teaching level or tenure status.

THE EFFECTS OF JOB ATTITUDES

The responses to the effects of job attitudes on teachers' performance, interpersonal relationships, mental health, attitudinal changes and turnover decisions were infrequent. In general, respondents either avoided answering questions pertaining to effects of job attitudes or declared that in essence they were immune to consequences of job feelings. This apparent reluctance, on the part of teachers, to discuss effects of job attitudes may be a function of the questions asked or the inability of the interviewers to prompt candid and liberal responses. It is likely that the questions asked by the interviewers were perceived as disturbing or threatening to teachers, thus, subjectively ignored. It is not likely, however, that teachers are super humans with the unique ability to exist and function without being affected by their good and bad job feelings. A further explanation for the infrequent effects responses, particularly in low attitude sequences, is that the student frequently becomes the effects target. One of the basic axioms of the teaching profession is promoting student welfare. To suggest that students may have suffered, because of a teacher's feelings and subsequent actions, would indeed be a traumatic confession.

The reported effects which appeared more often as a result of high job feelings were related to improved performance and positive attitudinal changes. Low attitude sequences contributed to larger frequencies for turnover and mental health effects.

The frequency with which each of the effects categories were not mentioned does not permit strong implications based on the reported effects. However, it does appear that turnover effects and poor mental health are functions of low job feelings and improved performance and positive attitudinal changes are functions of high job feelings for teachers.

CHAPTER VI

CONCLUSION

This study provides support for the hypothesis that satisfiers and dissatisfiers tend to be mutually exclusive. Further, it was found that factors which accounted for high attitudes of teachers were related to the work itself and factors which accounted for low attitudes of teachers were related to the conditions or environment of work.

Relative to other activities, teachers derive the most satisfaction from work-centered activity. This finding was reflected in the predominance of achievement, recognition and responsibility as sources of teacher job satisfaction. The low attitude sequences, however, revealed factors (interpersonal relations with parents and students, supervision technical, school policy and administration, personal life, perceived low status, and feelings of unfairness) which were not in themselves work-centered; rather, they focused on the conditions and people which surround the actual work.

Can we conclude that as long as a teacher experiences personal success, and is recognized for this success, the conditions of work need not be considered? It may be possible (although unlikely) for a teacher, who is immersed in an unsatisfactory work environment, to experience personal success and thus achieve considerable job satisfaction. An environment relatively free from sources of dissatisfaction, however, will tend to increase or enhance the appearance of factors which are direct contributors to job satisfaction.

A teacher who is relatively content with the behavior of his supervisor and with the quality of his interpersonal relationships, and who does not feel hampered by school policy and administrative actions presumably will have more opportunities for personal and professional success.

Herzberg refers to the dissatisfaction factors as hygienic. In describing these factors, Herzberg states:

> They act in a manner analagous to the principles of medical hygiene. Hygiene operates to remove health hazards from the environment of man. It is not a curative; it is, rather, a preventive.[1]

The hygienic factors, according to Herzberg, are essential in preventing dissatisfaction, in making work tolerable. Herzberg describes the satisfaction factors as motivators. These are the job centered, the task-oriented, factors which permit the individual to satisfy his need for self actualization in his work.[2]

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[1] Herzberg, The Motivation to Work, p. 113.

The dissatisfaction factors identified for teachers tend to focus on conditions and circumstances which teachers expect to be maintained at acceptable levels. It seems reasonable that teachers should expect fair and adequate supervision, supportive school policies and administrative directives, friendly interpersonal relationships and pleasant working conditions. However, the satisfaction factors focus directly on conditions and circumstances that are not given, which do not come with the job. These factors constitute rewards which must be earned through performance of the job. The reinforcement potential of the satisfiers is dependent upon a teacher's individual performance. If reward potential exists for the dissatisfiers, it does not appear to be directly dependent upon teacher performance.

What then are the implications of the study for administrative behavior? The findings suggest that the present emphasis on "teacher-centered" behavior (supportive supervision, interpersonal relations, effective communications, and group effectiveness) is an important prescription for effective administrative behavior. The "teacher-centered" approach, however, is limited in that it tends to concentrate on the elimination of dissatisfaction factors and thus does not contribute directly to teacher job satisfaction.

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[2] Ibid.

"Task-oriented" behavior (organizing and planning work, implementing goal achievement) emerges as an important and direct contributor to teacher job satisfaction. Such behavior, on the part of the administrator, would include increasing the opportunities for teachers to experience personal and professional success. Basic to this undertaking is the proposition that administrators will permit and encourage teachers to (1) exercise more autonomy in making decisions (intensifying collaborative efforts and consultative management would be a good start), (2) increase individual responsibility in developing and implementing teaching programs, and (3) develop professional skills. These variables will serve to increase individual identification with the task.[3] Task identification appears to be a prerequisite for focusing on achievement as a means to personal and professional success and subsequent job satisfaction.

A corollary to personal success is recognition for such success. Although recognition was not found to be as potent as actual success, it was perceived by teachers as a measure of success. Capitalizing on recognition, as a satisfier for teachers, implies that dispensing of recognition should be as closely associated with successful teacher task-oriented behavior as possible.

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[3] James March and Herbert Simon, Organizations. (New York: John Wiley and Sons, 1958), p. 77.

Finally, effective administrative behavior would not exclude or ignore the sources of job dissatisfaction. Supervisory behavior, interpersonal relationships, and other factors relating to the conditions of work are necessary components in promoting an environment which will enhance job itself satisfaction for teachers. Teachers whose energies are taxed in coping with sources of job dissatisfaction will tend not to be vigorous and dynamic pursuers of work-centered satisfaction.

An inherent assumption, in the discussion above, has been that job satisfiers are reinforcers of behavior and motivators of performance. Considerable evidence has been accumulated which disputes the claim that a satisfied worker is more productive than a dissatisfied one. However, when satisfaction is dependent upon performance in work, satisfaction and productivity are related.[4]

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[4] Bernard Bass, Organizational Psychology. (Boston: Allyn and Bacon, Inc., 1965), p. 38.

The satisfaction factors identified for teachers cannot be separated from performance and, in fact, are dependent upon performance. It was successful performance which accounted for the high attitudes expressed in achievement centered stories. Performance was also the basis for recognition centered sequences. If performance is rewarded in terms of intrinsic personal success and extrinsic recognition for success, it will tend to be repeated.

SUMMARY

The assumption that factors which tend to satisfy teachers and factors which tend to dissatisfy teachers are arranged on a conceptual continuum tends not to be supported by this study. Factors which appeared as sources of high job feelings for teachers tended to differ from factors which appeared as sources of low job feelings.

Further, the satisfaction factors tended to focus on the work itself, and the dissatisfaction factors tended to focus on the conditions of work.

It was concluded that the elimination of the dissatisfiers would tend not to result in job satisfaction. However, it does not appear likely that one can experience work satisfaction without the elimination or tempering of the dissatisfiers. The point is not whether satisfiers are more crucial than dissatisfiers, or *vice versa*, but rather the dependence of the satisfiers on the elimination or tempering of the dissatisfiers. Deriving satisfaction from work-centered activity assumes that one's energies and efforts are not taxed or depleted by unsatisfactory conditions of work.

FOR FUTURE RESEARCH

In view of the results of this investigation, two suggestions are offered for future research:

1. Accepting the Herzberg method, as a valid vehicle for gathering and discriminating between satisfaction and dissatisfaction factors, was a basic assumption of this study. This investigation supports the reliability of the Herzberg method, in that the results are in general agreement with Herzberg's study. A study which utilized a more objective approach to soliciting and discriminating between satisfiers and dissatisfiers would provide an indication of the validity of the Herzberg method.

2. The results of this study provide, at best, a general indication of the extent of need deficiencies for teachers. One might hastily conclude that teachers are psychologically ready to seek work-centered job satisfaction. A study, which attempts to investigate need deficiencies of teachers, would provide helpful clues as to need operation level of teachers. Such a study might provide a blue print for administrative prescription. Further, the relative importance of the satisfiers and dissatisfiers would be placed in focus.

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APPENDIX A

PERMISSION LETTER FROM DR. FREDERICK HERZBERG

(Copy of letter from Dr. Frederick Herzberg
granting the investigator permission
to use the factors and effects categories.)

WESTERN RESERVE UNIVERSITY
Cleveland, Ohio 44106

PSYCHOLOGY DEPARTMENT

May 20, 1965

Mr. Thomas Sergiovanni
112 Fairview Avenue
Rochester 19, New York

Dear Mr. Sergiovanni:

You have my permission to use the charts to which you make reference. I will be most interested in the findings of your study on job satisfaction of teachers. Please send me a copy, when it is completed.

Yours truly,

/s/ Frederick Herzberg
Professor

FH/jz

APPENDIX B

INSTRUMENTS

The following items are included in this appendix:

1. Interview Outline
2. Schema for Analysis of Factors

INTERVIEW OUTLINE

Developed by Frederick Herzberg, Bernard Mausner, and Barbara Snyderman and adopted for the purposes of this study.

Think of a time when you felt exceptionally good or exceptionally bad about your job, either your present teaching job or any other teaching job you have had. This can be either the "long-range" or the "short-range" kind of situation, as I have just described it. Tell me what happened.

1. How long ago did this happen?
2. How long did the feeling last? Can you describe specifically what made the change of feelings begin? When did it end?
3. Can you tell me more precisely why you felt the way you did at the time?
4. What did these events mean to you?
5. Did these feelings affect the way you did your job? How? How long did this go on?
6. Can you give me a specific example of the way in which your performance on the job was affected? How long?
7. Did what happen affect you personally in any way? How long? Did it change the way you got along with people in general or your family? Did it affect your sleep, appetite, digestion, or general health?
8. Did what happen basically affect the way you felt about working in that school or school district?
9. Did what happen change the way you felt about the teaching profession? How?

10. How serious were your feelings about your teaching job affected by what happened? Pick a spot on the line below to indicate how strong you think the feelings were. Circle that position on the line.

Least Average Greatest

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

11. Is there anything else you would like to say about the sequence of events you have described:

Repeat for second exceptionally high or low feeling and for most recent high and low feeling.

Now that you have described a time when you felt _______________about your teaching job, please think of another time, one during which you felt exceptionally _______________about your teaching job.

SCHEMA FOR ANALYSIS OF FACTORS

Developed by Frederick Herzberg,
Bernard Mausner, and Barbara Snyderman

1. Recognition--first level

    0. Not mentioned.
    1. Work praised--no reward.
    2. Work praised--reward given.
    3. Work noticed--no praise.
    4. Work not noticed.
    5. Good idea(s) not accepted.
    6. Inadequate work blamed or criticized--no punishment.
    7. Inadequate work blamed or criticized--punishment given.
    8. Successful work blamed or criticized--no punishment
    9. Successful work blamed or criticized--punishment given.
    R. Credit for work taken by supervisor or other.
    X. Idea accepted by company.

2. Achievement--first level

    0. Not mentioned.
    1. Successful completion of job, or aspect of it.
    2. The having of a good idea--a solution to a problem.
    3. Made money for the company.
    4. Vindication--demonstration of rightness to doubters or challengers.
    5. Failure in job, or aspect of it.
    6. Seeing results of work.
    7. Not seeing results of work.

3. Possibility of growth--first level

    0. Not mentioned.
    1. Growth in skills--objective evidence.

   2. Growth in status (advancement)--objective evidence
   3. Lack of opportunity for growth--objective evidence.

4. Advancement--first level

   0. Not mentioned.
   1. Received unexpected advancement.
   2. Received advancement (expected to expectation not mentioned).
   3. Failed to receive expected advancement.
   4. Demotion.

5. Salary--first level

   0. Not mentioned.
   1. Received wage increase (expected or expectation not mentioned).
   2. Received unexpected wage increase.
   3. Did not receive expected increase.
   4. Received wage increase less or later than expected.
   5. Amount of salary.
   6. Wages compare favorably with others doing similar or same job.
   7. Wages compare unfavorably with others doing similar or same job.

6. Interpersonal relations--supervisor--first level

   0. Not mentioned.
   1. Friendly relations with supervisor.
   2. Unfriendly relations with supervisor.
   3. Learned a great deal from supervisor.
   4. Supervisor went to bat for him with management.
   5. Supervisor did not support him with management.
   6. Supervisor honest.
   7. Supervisor dishonest.
   8. Supervisor willing to listen to suggestions.
   9. Supervisor unwilling to listen to suggestions.
   R. Supervisor gave credit for work done.
   X. Supervisor withheld credit.

7. Interpersonal relations--subordinates--first level

   0. Not mentioned.
   1. Good working relationship with subordinates
   2. Poor working relationship with subordinates.
   3. Good personal relationship with subordinates.
   4. Poor personal relationship with subordinates.

8. Interpersonal relations--peers--first level

   0. Not mentioned.
   1. Liked people he worked with.
   2. Did not like people he worked with.
   3. Cooperation of people he worked with.
   4. Lack of cooperation on the part of his co-workers.
   5. Was part of a cohesive group.
   6. Was isolated from group.

9. Supervision--technical--first level

   0. Not mentioned.
   1. Supervisor competent.
   2. Supervisor incompetent.
   3. Supervisor tried to do everything himself.
   4. Supervisor delegated work well.
   5. Supervisor consistently critical.
   6. Supervisor showed favoritism.

10. Responsibility--first level

   0. Not mentioned.
   1. Allowed to work without supervision
   2. Responsible (for his own efforts).
   3. Given responsibility for the work of others.
   4. Lack of responsibility.
   5. Given new responsibility--no formal advancement.

11. Company policy and administration--first level

   0. Not mentioned.
   1. Effective organization of work.
   2. Harmful or ineffective organization of work.
   3. Beneficial personnel policies.

4. Harmful personnel policies.
5. Agreement with company goals.
6. Disagreement with company goals.
7. High company status.
8. Low company status.

12. Working conditions--first level

0. Not mentioned.
1. Work isolated.
2. Work in social surroundings.
3. Good physical surroundings.
4. Poor physical surroundings.
5. Good facilities.
6. Poor facilities.
7. Right amount of work.
8. Too much work.
9. Too little work.

13. The work itself--first level

0. Not mentioned.
1. Routine.
2. Varied.
3. Creative (challenging).
4. Too easy.
5. Too difficult.
6. Opportunity to do a whole job--all phases.

14. Factors in personal life--first level

0. Not mentioned.
1. Family problems.
2. Community and other outside situations.
3. Family needs and aspirations salarywise.

15. Status--first level

0. Not mentioned.
1. Signs or appurtenances of status.
2. Having a given status.
3. Not having a given status.

16. Job security--first level

    0. Not mentioned.
    1. Tenure or other objective signs of job security.
    2. Lack of objective signs of security (i.e., company instability).

17. Recognition--second level

    0. Not mentioned.
    1. First-level factors perceived as source of feelings of recognition.
    2. First-level factors perceived as source of failure to obtain recognition.
    3. First-level factors perceived as source of disapproval.

18. Achievement--second level

    0. Not mentioned.
    1. First-level factors perceived as source of achievement.
    2. First-level factors perceived as source of failure.

19. Possible growth--second level

    0. Not mentioned.
    1. First-level factors perceived as leading to possible growth.
    2. First-level factors perceived as block to growth.
    3. First-level factors perceived as evidence of actual growth.

20. Advancement--second level

    0. Not mentioned.
    1. Feelings of advancement derived from changes in job situation.
    2. Feelings of demotion derived from changes in job situation.

21. Responsibility--second level

    0. Not mentioned.
    1. First-level factors leading to feelings of responsibility.
    2. First-level factors as source of feelings of lack of responsibility.

22. Group feeling--second level

    0. Not mentioned.
    1. Feelings of belonging--social.
    2. Feelings of isolation--social.
    3. Feelings of belonging--sociotechnical.
    4. Feelings of isolation--sociotechnical.
    5. Positive feelings toward group.
    6. Negative feelings toward group.

23. The work itself--second level

    0. Not mentioned.
    1. First-level factors leading to interest in performance of the job.
    2. First-level factors leading to lack of interest in performance of the job.

24. Status--second level

    0. Not mentioned.
    1. First-level factors as source of feelings of increased status.
    2. First-level factors as source of feelings of decreased status.

25. Security--second level

    0. Not mentioned.
    1. First-level factors as source of feelings of security.
    2. First-level factors as source of feelings of insecurity.

26. Feelings of fairness or unfairness--second level

0. Not mentioned.
1. First-level factor perceived as fair.
2. First-level factor perceived as unfair.
3. First-level factor perceived as source of feelings of disappointment in others.

27. Feelings of pride or shame

0. Not mentioned.
1. First-level factors as source of feelings of pride.
2. First-level factors as source of feelings of shame.
3. First-level factors as source of feelings of diminished pride.

28. Salary--second level

0. Not mentioned.
1. First-level factors perceived as source of ability to improve well being.
2. First-level factors perceived as source of lack of ability to improve well being.
3. First-level factors perceived as source of more money (need undetermined).
4. First-level factors perceived as source of lack of more money (need undetermined).

Analysis of Effects:

1. Performance effects

0. Not mentioned.
1. General statements regarding positive change in quality or output of work.
2. General statements regarding negative change in quality or output of work.
3. Positive changes in rate or amount of time spent in work.

4. Negative changes in rate or amount of time spent in work.
5. Specific reports of positive changes in quality or nature of work.
6. Specific reports of negative changes in quality or nature of work.
7. Reports of positive changes in both rate and quality of work.
8. Reports of negative changes in both rate and quality of work.
9. Statement affirming lack of change in amount or quality of work.

2. Turnover effects

    0. Not mentioned.
    1. Quit.
    2. Made connections.
    3. Read papers--looked around--took steps but without contacting companies or agencies.
    4. Thought of quitting.
    5. No thought of quitting despite negative feelings.
    6. Would not quit now because of positive feelings.
    7. Would not quit despite specific offers.
    8. Factor in decision to quit at later date.

3. Mental-health effects

    0. Not mentioned.
    1. Loss of sleep.
    2. Psychosomatic effects.
    3. Psychological effects of tension (anxiety, loss of appetite, headaches, etc.).
    4. Psychosomatic effects and tension symptoms.
    5. Improvement in psychosomatic conditions.
    6. Improvement in tension symptoms.
    7. Improvement in psychosomatic condition and tension symptoms.

4. Interpersonal relations effects

    0. Not mentioned.
    1. General statements regarding positive effects.

2. General statements regarding negative effects.
3. Positive effects on family.
4. Negative effects on family.
5. Positive effects on friends.
6. Negative effects on friends.
7. Positive effects on co-workers.
8. Negative effects on co-workers.
9. Many specific positive effects on interpersonal relations.
R. Many specific negative effects on interpersonal relations.

5. Attitudinal effects

0. Not mentioned.
1. Positive toward individual (supervisor).
2. Negative toward individual (supervisor).
3. Positive toward company.
4. Negative toward company.
5. Positive toward profession.
6. Negative toward profession.
7. Positive security feelings.
8. Negative security feelings.
9. Positive effects regarding confidence.
R. Negative effects regarding confidence.
X. Multiple effects on attitude (positive).

6. Miscellaneous effects

0. Not mentioned.
1. By products--effects of effects affecting other than job life.
2. Direct effects of attitudes affecting other than job life.

APPENDIX C

SUPPORTING DATA

CODING CHOICES OF THREE JUDGES FOR EACH OF THE ONE HUNDRED AND SIXTY SEQUENCES

TABLE XXX

CODING CHOICES OF THREE JUDGES FOR EACH OF THE ONE HUNDRED AND SIXTY SEQUENCES

	First-Level Factors																Second-Level Factors											
	Recognition	Achievement	Growth	Advancement	Responsi-bility	Salary	I-R Superiors	I-R Subordinates	I-R Peers	Supervision technical	School policy admin.	Working conditions	Work Itself	Personal life	Status	Security	Recognition	Achievement	Growth	Advancement	Responsi-bility	Group feeling	Work Itself	Status	Security	Fairness-unfairness	Pride and Inadequacies	Salary
1 L		1						2										3										
2 H	2								1									3										
3 L											3												3					
4 H	2	1																3										
5 L									3																	1	2	
6 H		3																3										
7 H	3																	3										
8 L								3																			3	
9 L									3																1		2	
10 H	1								2									3										
11 H	1												2					3										
12 L	1										1			1													3	
13 H		3															1	2										
14 L		1			1								1					3										
15 H	1												2					3										
16 L											3								2					1				
17 H					3														1		2							
18 L													3										3					
19 H												2	1					1					2					
20 L									3														1			2		

(Continued)

TABLE XXX

CODING CHOICES OF THREE JUDGES FOR EACH OF THE ONE HUNDRED AND SIXTY SEQUENCES

	First-Level Factors																Second-Level Factors											
	Recognition	Achievement	Growth	Advancement	Responsibility	Salary	I-R superiors	I-R subordinates	I-R peers	Supervision technical	School policy admin.	Working conditions	Work Itself	Personal life	Status	Security	Recognition	Achievement	Growth	Advancement	Responsibility	Group feeling	Work Itself	Status	Security	Fairness-unfairness	Pride and Inadequacies	Salary
21 H							2						1				1						2					
22 L						3											2									1		
23 H	2																	3										
24 L										3													2			1		
25 H		1						2										1	2									
26 L					1						2														1	2		
27 H	2							1									2			1								
28 L								3									3											
29 L								3									1							2				
30 H													3									2	1					
31 L											3										1					2		
32 H		3																2					1					
33 L										3														1		2		
34 H			2		1													1			2							
35 L										1	2						3											
36 H	3																3											
37 H												3									3							
38 L	3																									3		
39 H												1	2												3			
40 L									3										1								2	

(Continued)

TABLE XXX

CODING CHOICES OF THREE JUDGES FOR EACH OF THE ONE HUNDRED AND SIXTY SEQUENCES

	First-Level Factors																Second-Level Factors											
	Recognition	Achievement	Growth	Advancement	Responsibility	Salary	I-R Superiors	I-R Subordinates	I-R Peers	Supervision technical	School policy admin.	Working conditions	Work Itself	Personal life	Status	Security	Recognition	Achievement	Growth	Advancement	Responsibility	Group feeling	Work Itself	Status	Security	Fairness-unfairness	Pride and inadequacies	Salary
41 L														3											3			
42 L							1			2																3		
43 H	1		2														2							1				
44 H	3																1	2										
45 L										1				2				1								2		
46 H		3																3										
47 H													3										3					
48 L									3																	3		
49 L								2				1														3		
50 H													3					3										
51 L	1							2									2						1					
52 H			3														3											
53 H	2							1									3											
54 L	1		2																2	1								
55 H	1							2										1								2		
56 L												3						2					1					
57 H		2						1										3										
58 H											3						2		1									
59 L													3										3					
60 L											2		1													3		

(Continued)
TABLE XXX

CODING CHOICES OF THREE JUDGES FOR EACH OF THE ONE HUNDRED AND SIXTY SEQUENCES

	First-Level Factors																Second-Level Factors											
	Recognition	Achievement	Growth	Advancement	Responsibility	Salary	I-R superiors	I-R subordinates	I-R peers	Supervision technical	School policy admin.	Working conditions	Work Itself	Personal life	Status	Security	Recognition	Achievement	Growth	Advancement	Responsibility	Group feeling	Work Itself	Status	Security	Fairness-unfairness	Pride and Inadequacies	Salary
61 H	3																3											
62									3																	1	2	
63		3																3										
64 L	1						1			1															2			
65 H		2											1					3										
66 L	1										2															3		
67 H	1	2																3										
68 L								3										1						2				
69 L													3										3					
70 H	2												1				2	1										
71 H	1					2											2	1										
72 L					1								2								2		1					
73 L								2					1														3	
74 H	1							2										3										
75 H	2								1								3											
76 L					1						2										2		1					
77 L										3															3			
78 L								3										3										
79 H		3															1	2										
80 H	2						1											3										

(Continued)
TABLE XXX

CODING CHOICES OF THREE JUDGES FOR EACH OF THE ONE HUNDRED AND SIXTY SEQUENCES

	First-Level Factors																Second-Level Factors											
	Recognition	Achievement	Growth	Advancement	Responsibility	Salary	I-R superiors	I-R subordinates	I-R peers	Supervision technical	School policy admin.	Working conditions	Work Itself	Personal life	Status	Security	Recognition	Achievement	Growth	Advancement	Responsibility	Group feeling	Work Itself	Status	Security	Fairness-unfairness	Pride and Inadequacies	Salary
81 L	3																									3		
82 H		3																3										
83 H	3																	3										
84 L		2										1						3										
85 H		3																1	2									
86 L							3										1							2				
87 H	1	2																3										
88 L											3												1			2		
89 L	1									2							1									2		
90 H												1	2						1				2					
91 L								2				1										3						
92 H		3																3										
93 H	2	1															2										1	
94 L							1			2																3		
95 H	2							1									1	2										
96 L											1					2												3
97 H		1						2											2							1		
98 L											3															3		
99 H	3																								3			
100 L	2							3										3										

(Continued)

TABLE XXX

CODING CHOICES OF THREE JUDGES FOR EACH OF THE ONE HUNDRED AND SIXTY SEQUENCES

	First-Level Factors																Second-Level Factors											
	Recognition	Achievement	Growth	Advancement	Responsi-bility	Salary	I-R superiors	I-R subordinates	I-R peers	Supervision technical	School policy admin.	Working conditions	Work Itself	Personal life	Status	Security	Recognition	Achievement	Growth	Advancement	Responsi-bility	Group feeling	Work Itself	Status	Security	Fairness-unfairness	Pride and Inadequacies	Salary
101 H	2			1													3											
102 H		3																									3	
103 L		1											2					3										
104 L				3																						3		
105 L									3								2					1						
106 H	2							1									3											
107 L														3													3	
108	1							2									2										1	
109 H	1																1				2							
110 L											3															3		
111 H		3																3										
112 L												3											3					
113 H		1											2										1				2	
114 L									3																		3	
115 H		2											1					3										
116 L									1			1	1													3		
117 H		2											1								1		2					
118 L								3													1				2			
119 H													3					2									1	
120 L		2										1						3										

(Continued)

TABLE XXX

CODING CHOICES OF THREE JUDGES FOR EACH OF THE ONE HUNDRED AND SIXTY SEQUENCES

	First-Level Factors																Second-Level Factors											
	Recognition	Achievement	Growth	Advancement	Responsi-bility	Salary	I-R superiors	I-R subordinates	I-R peers	Supervision technical	School policy admin.	working conditions	Work Itself	Personal life	Status	Security	Recognition	Achievement	Growth	Advancement	Responsi-bility	Group feeling	Work Itself	Status	Security	Fairness-unfairness	Pride and Inadequacies	Salary
121 H		3																3										
122 L							1			2																3		
123 L									3															1		2		
124 H												2	1										3					
125 L								3										1									2	
126 H		3																3										
127 L																	2									1		
128 H		3																3										
129 H	3																	3										
130 L									2				1				2											
131 H						3											3											
132 L									1				2				2				1							
133 H		1			2																						3	
134 L						3																				3		
135 H	1										2						3											
136 L						2					1															2		1
137 L								2				1						1									2	
138 H	1									2												2		1				
139 L							3										3											
140 H	3																3											

(Continued)

TABLE XXX.

CODING CHOICES OF THREE JUDGES FOR EACH OF THE ONE HUNDRED AND SIXTY SEQUENCES

	First-Level Factors																Second-Level Factors											
	Recognition	Achievement	Growth	Advancement	Responsibility	Salary	I-R superiors	I-R subordinates	I-R peers	Supervision technical	School policy admin.	Working conditions	Work Itself	Personal life	Status	Security	Recognition	Achievement	Growth	Advancement	Responsibility	Group feeling	Work Itself	Status	Security	Fairness-unfairness	Pride and Inadequacies	Salary
141 H	2																3											
142 L		2										1						3										
143 L	1								2													1				2		
144 H		3																				3						
145 L													3										3					
146 L											3										1					2		
147 H													3								3							
148 H			3															3										
149 H		3																					3					
150 L	3																											
151 H		1											2					3										
152 L		3																3										
153 L										2			1															
154 H					3													3										
155 L														3								3						
156 H					3													2			1							
157 L								3										3										
158 H	3																	3										
159 L								3									1	2										
160 H		3																3										